المراجعة رقم (1)









First term Questions Bank



Question 01 — Choose the correct answers

1. Nutrients and oxygen enter cell through the ....
   - (a) cell membrane (b) mitochondria (c) Chloroplast (d) nucleus
2. Which of the following structures is found in both plant and animal cells?
   - (a) Cell membrane (b) Cell wall (c) Large vacuole (d) Chloroplast
3. The control center of the cell and is responsible for cell division ....
   - (a) mitochondria (b) nucleus (c) golgi apparatus (d) chloroplast
4. Which of the following is found in an acacia plant leaf and is not found in human?
   - (a) Cell wall (b) Mitochondria (c) Cell membrane (d) Cytoplasm
5. We can see the cell of .... without using a microscope.
   - (a) bacteria (b) plant (c) human (d) birds' egg
6. Most plants appear in ....color due to the presence of chlorophyll pigment in their cells
   - (a) yellow (b) red (c) blue (d) green
7. The animal cell cannot make photosynthesis process, because it doesn't have...........
   - (a) nucleus (b) chloroplasts (c) mitochondria (d) sap vacuole
8. The body of .... composed of one cell only.
   - (a) human (b) bacteria (c) a big tree (d) an elephant
9. The smallest tiny structures that build up all living organism's bodies are......
   - (a) systems (b) cells (c) organs (d) bricks
10. When two muscles work together to carry out a movement one muscle .... while the other ....
    - (a) moves - stays still (b) contracts - relaxes (c) stays still - relaxes (d) stays still - contracts

11. Diabetes is a disorder of the endocrine system. In people with diabetes, the .... does not produce enough insulin.
    - (a) gallbladder
    - (b) thyroid gland
    - (c) pancreas
    - (d) small intestine

12. All the following animals have bones in their bodies, except..........
    - (a) cats
    - (b) dogs
    - (c) birds
    - (d) insects

13. The systems of the human body get their needed energy from......
    - (a) the Sun
    - (b) water
    - (c) food
    - (d) carbon dioxide

14. Urination process happens by the help of.......... system.
    - (a) digestive
    - (b) urinary
    - (c) respiratory
    - (d) skeletal

15. Stomach is composed of a group of different..........
    - (a) cells
    - (b) systems
    - (c) organs
    - (d) tissues

16. Skeletal system takes nutrients from.......... system for growth of muscles
    - (a) circulatory
    - (b) digestive
    - (c) nervous
    - (d) respiratory

17. In a dangerous situation, your eyes send the information to the.................... perform the suitable action.
    - (a) brain
    - (b) stomach
    - (c) lungs
    - (d) heart

18. Engineers design special devices to work instead of............... organ which filter the blood from waste materials
    - (a) stomach
    - (b) heart
    - (c) kidney
    - (d) lung

19. The factors on which gravitational force depends are ....
    - (a) mass and shape
    - (b) size and shape
    - (c) mass and volume
    - (d) distance and mass

20. The electrical insulating materials include ....
    - (a) rubber
    - (b) iron
    - (c) copper
    - (d) aluminum

21. When a piece of aluminum is replaced by a piece of wood in an electrical circuit, this causes ....
    - (a) current flow
    - (b) open the circuit
    - (c) close the circuit
    - (d) lighting the lamp

22. The .... of objects and the...........between them affect the gravity force.
    - (a) mass – color
    - (b) distance - mass
    - (c) mass – distance
    - (d) volume - distance

23. The internal switch on a .... can be used in the refrigerator to adjust its temperature
ⓐ battery ⓑ light bulb ⓒ thermostat ⓓ wall socket

24. ....is used to slow the flow of an electric current in the electric circuit
ⓐ A battery ⓑ A switch ⓒ A resistor ⓓ A lamp

25. Magnets can be made of................
ⓐ copper ⓑ glass ⓒ iron ⓓ plastic

26. Heat will flow from the .... substance to the .... one.
ⓐ hotter - colder ⓑ frozen - melted ⓒ colder - hotter ⓓ larger - smaller

27. The temperature of a substance is defined as the average amount of .... of the molecules or other particles of a sample of matter.
ⓐ potential energy ⓑ mass ⓒ kinetic energy ⓓ number

28. Objects with more thermal energy have .... kinetic energy.
ⓐ more ⓑ less ⓒ the same ⓓ no

29. .... happens as a result of the separation of the particles of a substance when heat is transferred to it.
ⓐ Contraction ⓑ Expansion ⓒ Growth ⓓ Freezing point

30. Raising the temperature of materials can cause ....
ⓐ freezing and expansion ⓑ condensation and contraction ⓒ melting and expansion ⓓ melting and contraction

31. The point at which molecules in liquid water are heated and separated from each other until they become gas, is called ....
ⓐ melting point ⓑ freezing point ⓒ boiling point ⓓ kinetic energy

32. Which energy is generated due to the motion of particles in a certain substance?
ⓐ Thermal energy ⓑ Muscular energy ⓒ Momentary energy ⓓ Potential energy

33. Matter in the liquid state has .... volume and .... shape.
ⓐ fixed - fixed ⓑ variable - fixed ⓒ variable - variable ⓓ fixed - variable

34. .... is used to measure the temperature of materials.
ⓐ Measuring container ⓑ Graduated cylinder ⓒ Thermometer ⓓ Measuring tape

35 The .... energy is related to the motion of particles of matter

(a) chemical (b) potential (c) light (d) thermal

36 Particles of all the following substances have a lot of energy, except ....

(a) oxygen (b) carbon dioxide (c) water vapor (d) glass

37 Changing from gas to liquid is called..........

(a) melting (b) condensation (c) evaporation (d) freezing

38 Materials.......... by heating.

(a) expand (b) contract (c) compress (d) do not change

39 The molecule is composed of very small particles called ....

(a) compounds (b) cells (c) atoms (d) mixtures

40 All of these substances are solids, except............

(a) oil (b) snow (c) pen (d) iron

41 If you want to design a product which conducts heat well which material will you think of?

(a) Wood (b) Plastic (c) Foam (d) Metal

42 .... is the transfer of heat due to the movement of a liquid or gas.

(a) Radiation (b) Conduction (c) Freezing (d) Convection

43 Which of the following may not be a source of thermal energy?

(a) Small oven (b) The Sun (c) Moon (d) The heater

44 Heat is transferred by convection in the molecules of the following substances, except ....

(a) milk (b) water (c) air (d) iron

45 Sunlight and the heat of the Sun reach Earth by ....

(a) conduction (b) radiation (c) convection (d) a, c

46 Heat is transferred through solids by.............

(a) radiation only (b) conduction and convection (c) conduction only (d) radiation and convection

47 Meteorologists are scientists who study ....

(a) weather (b) rocks (c) water (d) space



48. To make clothes we can use...........
    - a) steel
    - b) concrete
    - c) hard fabric
    - d) flexible fabric

49. Railroad tracks are made up of ....
    - a) iron
    - b) plastic
    - c) coal
    - d) glass

50. All the following are properties of steel, except ....
    - a) it is a mixture of rock and sand
    - b) it is a mixture of iron and other elements.
    - c) it is strong material.
    - d) it lasts for a long time

Question 02 put (true) or (false)

1. All cells are formed of organelles, each of which performs a different function. (   )
2. Tissue consists of a group of similar cells. (   )
3. Water and wastes are stored in the vacuole. (   )
4. Plant cells and animal cells are completely similar in structure. (   )
5. All living cells contain chloroplasts. (   )
6. Chloroplasts are found in the cells of banana plant leaves. (   )
7. Bacteria and horse are considered as multicellular organisms. (   )
8. Cell biologists are scientists who study rocks. (   )
9. The brain does not respond when feeling stressed. (   )
10. Every system in the body works individually when exposed to danger. (   )
11. Sweat is excreted by the lungs. (   )
12. The skin takes part in expelling sweat through the pores. (   )
13. The muscles of the body work together at the same time (   )
14. A human can control the movement of blood in his body. (   )
15. Muscle cells are short Fibers that allow movement, storage and release of energy. (   )
16. Heat is transferred from a substance of low temperature to a substance of higher temperature. (   )

17. If your body doesn't get rid of waste, you will be healthy. ( )
18. Diabetes disease is one of the disorders of the respiratory system. ( )
19. Muscle cells cannot store and use energy quickly. ( )
20. The heart is important in our body as it helps in food digestion. ( )
21. Exoskeleton gives some insects their shapes. ( )
22. All systems in your body work together in an integrated way. ( )
23. Cobalt is an example of magnetic materials. ( )
24. In series circuits, the electric current can flow in different branches. ( )
25. All materials can be attracted to the magnet ( )
26. If we remove a lamp from the circuit in figure (A), the other lamp still light ( )
27. The magnet has a force called magnetism ( )
28. Magnets attract the non-magnetic materials such as iron, nickel and steel ( )
29. The needle of a galvanometer moves on moving a magnet in and out of a copper coil. ( )
30. When the thermal energy of the objects increases, the kinetic energy of its molecules increases too. ( )
31. Freezing is the transfer of heat due to the movement of a liquid or gaseous substance. ( )
32. Matter in the liquid state has a fixed volume and a variable shape ( )
33. Measuring container is used to measure the temperature of materials. ( )
34. We can measure the temperature by using thermometers. ( )
35. Matter can't be changed from one form to another. ( )
36. Expansion and contraction are two opposite processes. ( )
37. Thermal conductors are good conductors of heat. ( )
38. Expansion and contraction of matter occur due to changes in temperature ( )
39. Molecules of cold or hot substances always move. ( )
40. No spaces are left between railroad tracks. ( )
41. Heat flows from a colder substance to a hotter substance. ( )

42. Thermal energy transfer can occur in only two ways. ( )
43. Sunlight and heat reaching Earth is an example of thermal radiation. ( )
44. The final temperature is greater than the temperature of two bodies in contact. ( )
45. Thermal energy is destroyed when it is transferred from one body to another. ( )
46. Thermal energy is transferred in metals by radiation ( )
47. The transfer of heat between two bodies stops when the temperature of each is the same. ( )
48. Metals such as copper and iron allow heat to travel freely through them. ( )
49. Plastic often resists burning. ( )
50. In electric iron heat transfers from cloth to iron. ( )

Question 03 — Cross the odd word

1. Human - Fish - Plant - Bacteria.
2. Urine - Oxygen gas - Carbon dioxide - Sweat.
3. Plastic - Copper - Iron - Aluminium
4. Air – Copper – Wood - Glass
5. Oil - Milk - Iron - Vinegar.
6. Conduction - Convection - Friction - Radiation

Question 04 — write the scientific term for each of the following

1. A device used to examine very small things. ( )
2. It is often located at the center of the cell. ( )
3. The are scientists who study cells. ( )
4. The component of cell that allows water to enter and exit the cell ( )
5. It surrounds the plant cell to give it a definite shape. ( )
6. A group of organs that work together to perform a specific function. ( )



7. A system that secretes hormones stimulating the rest of the body's systems to respond. ( )
8. The system which helps the body to move. ( )
9. The organ that controls the level of sugar in human body ( )
10. A hormone that controls the level of sugar in human body ( )
11. They are muscles that you can control their movement. ( )
12. A disease that is resulting from the disorder of secreting insulin hormone by pancreas. ( )
13. The pattern formed by iron filings near the magnet. ( )
14. Small electric charges moving in the wires in a closed electrical circuit. ( )
15. The materials that are attracted to the magnet. ( )
16. The materials that the electric charges can flow through. ( )
17. A form of energy produced from generators and turbines. ( )
18. The area around the magnet in which its force appears. ( )
19. It is a group of atoms bound together. ( )
20. The state of matter which changes into liquid state by heating. ( )
21. A device used to measure the temperature. ( )
22. A mixture of rock, sand and water which becomes hard after it dries. ( )
23. The mass of a substance doesn't change when this substance changes from one state into another. ( )
24. They are materials that slow down the heat transfer through them . ( )
25. It occurs when heat transfer stops between two objects reach the same temperature. ( )

Question 05 Give reason for each of the following

1. The cell allows water to go outside it.

....

2. Cats are considered as multicellular organism

....

3. Stomach secretes a digestive fluid when the food reaches it.

....

4. Muscle cells are in the form of long Fibers

....

5. The muscles that surround the eyeball are considered as voluntary muscles

....

6. Cobalt and nickel are considered as magnetic materials.

....

7. Particles of steam have higher thermal energy than particles of water.

....

8. Engineers use expansion points in the designing of bridges.

....

9. You feel heat, when you touch a metal spoon placed in a hot cup of tea.

....

Question 06 What happens if ..... ?

1. The animal cell is surrounded by cell wall.

....

2. There is much water enters the cell.

....

3. The blood does not pass through the two kidneys during its circulation inside the human body.

....

4. The lungs when the diaphragm muscle contracts.

....

5. A magnet is approached close to some iron nails mixed with small pieces of paper.

....

6. The force of gravity if the distance between the object and Earth's center increases.

....

7. The size of an inflated balloon if it is put in hot weather.

....

8. The level of alcohol inside a thermometer if we put it inside cold

....

9. The mass of a piece of butter after melting it

....

10. Molecules' movement of a hotter substance after mixing it with a cooler substance.

....

	Concept 1	Concept 2	Concept 3	Concept 4	Concept 5
Choose	1-9	10-18	19-25	26-40	41-50
Put right or wrong	1-8	9-22	23-29	30-41	42-50
Cross the odd word	1	2	3-4	5	6
Write s- term	1-5	6-12	3-18	19-20	21-25
Give reason	1-2	3-5	6	7-8	9
What happens	1-2	3-4	5-6	7-8	9-10

تم بحمد الله

بسم الله الرحمن الرحيم " إِنَّ الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ إِنَّا لَا نُضِيعُ أَجْرَ مَنْ أَحْسَنَ عَمَلًا " صدق الله العظيم

Answers



Question 01 Choose the correct answers

1. Nutrients and oxygen enter cell through the ....
   - (a) cell membrane
   - (b) mitochondria
   - (c) Chloroplast
   - (d) nucleus

2. Which of the following structures is found in both plant and animal cells?
   - (a) Cell membrane
   - (b) Cell wall
   - (c) Large vacuole
   - (d) Chloroplast

3. The control center of the cell and is responsible for cell division ....
   - (a) mitochondria
   - (b) nucleus
   - (c) golgi apparatus
   - (d) chloroplast

4. Which of the following is found in an acacia plant leaf and is not found in human?
   - (a) Cell wall
   - (b) Mitochondria
   - (c) Cell membrane
   - (d) Cytoplasm

5. We can see the cell of .... without using a microscope.
   - (a) bacteria
   - (b) plant
   - (c) human
   - (d) birds' egg

6. Most plants appear in ....color due to the presence of chlorophyll pigment in their cells
   - (a) yellow
   - (b) red
   - (c) blue
   - (d) green

7. The animal cell cannot make photosynthesis process, because it doesn't have...........
   - (a) nucleus
   - (b) chloroplasts
   - (c) mitochondria
   - (d) sap vacuole

8. The body of .... composed of one cell only.
   - (a) human
   - (b) bacteria
   - (c) a big tree
   - (d) an elephant

9. The smallest tiny structures that build up all living organism's bodies are......
   - (a) systems
   - (b) cells
   - (c) organs
   - (d) bricks

10. When two muscles work together to carry out a movement one muscle .... while the other ....
    - (a) moves - stays still
    - (b) contracts - relaxes
    - (c) stays still - relaxes
    - (d) stays still - contracts

11. Diabetes is a disorder of the endocrine system. In people with diabetes, the .... does not produce enough insulin.
    - (a) gallbladder
    - (b) thyroid gland
    - (c) pancreas
    - (d) small intestine




12. All the following animals have bones in their bodies, except..........

(a) cats (b) dogs (c) birds (d) insects

13. The systems of the human body get their needed energy from......

(a) the Sun (b) water (c) food (d) carbon dioxide

14. Urination process happens by the help of.......... system.

(a) digestive (b) urinary (c) respiratory (d) skeletal

15. Stomach is composed of a group of different..........

(a) cells (b) systems (c) organs (d) tissues

16. Skeletal system takes nutrients from.......... system for growth of muscles

(a) circulatory (b) digestive (c) nervous (d) respiratory

17. In a dangerous situation, your eyes send the information to the.................... perform the suitable action.

(a) brain (b) stomach (c) lungs (d) heart

18. Engineers design special devices to work instead of.............. organ which filter the blood from waste materials

(a) stomach (b) heart (c) kidney (d) lung

19. The factors on which gravitational force depends are ....

(a) mass and shape (b) size and shape (c) mass and volume (d) distance and mass

20. The electrical insulating materials include ....

(a) rubber (b) iron (c) copper (d) aluminium

21. When a piece of aluminum is replaced by a piece of wood in an electrical circuit, this causes ....

(a) current flow (b) open the circuit (c) close the circuit (d) lighting the lamp

22. The .... of objects and the...........between them affect the gravity force.

(a) mass – color (b) distance - mass (c) mass – distance (d) volume - distance

23. The internal switch on a .... can be used in the refrigerator to adjust its temperature

(a) battery (b) light bulb (c) thermostat (d) wall socket

24. ....is used to slow the flow of an electric current in the electric circuit

(a) A battery (b) A switch (c) A resistor (d) A lamp

25. Magnets can be made of................

(a) copper (b) glass (c) iron (d) plastic

26. Heat will flow from the .... substance to the .... one.

(a) hotter - colder (b) frozen - melted (c) colder - hotter (d) larger - smaller

27. The temperature of a substance is defined as the average amount of .... of the molecules or other particles of a sample of matter.

(a) potential energy (b) mass (c) kinetic energy (d) number

28. Objects with more thermal energy have .... kinetic energy.

(a) more (b) less (c) the same (d) no

29. .... happens as a result of the separation of the particles of a substance when heat is transferred to it.

(a) Contraction (b) Expansion (c) Growth (d) Freezing point

30. Raising the temperature of materials can cause ....

(a) freezing and expansion (b) condensation and contraction (c) melting and expansion (d) melting and contraction

31. The point at which molecules in liquid water are heated and separated from each other until they become gas, is called ....

(a) melting point (b) freezing point (c) boiling point (d) kinetic energy

32. Which energy is generated due to the motion of particles in a certain substance?

(a) Thermal energy (b) Muscular energy (c) Momentary energy (d) Potential energy

33. Matter in the liquid state has .... volume and .... shape.

(a) fixed - fixed (b) variable - fixed (c) variable - variable (d) fixed - variable

34. .... is used to measure the temperature of materials.

(a) Measuring container (b) Graduated cylinder (c) Thermometer (d) Measuring tape

35. The .... energy is related to the motion of particles of matter

(a) chemical (b) potential (c) light (d) thermal

36. Particles of all the following substances have a lot of energy, except ....

(a) oxygen (b) carbon dioxide (c) water vapor (d) glass

37. Changing from gas to liquid is called..........

(a) melting (b) condensation (c) evaporation (d) freezing

38. Materials.......... by heating.

(a) expand (b) contract (c) compress (d) do not change

39. The molecule is composed of very small particles called ....

(a) compounds (b) cells (c) atoms (d) mixtures

40. All of these substances are solids, except............

(a) oil (b) snow (c) pen (d) iron

41. If you want to design a product which conducts heat well which material will you think of?

(a) Wood (b) Plastic (c) Foam (d) Metal

42. .... is the transfer of heat due to the movement of a liquid or gas.

(a) Radiation (b) Conduction (c) Freezing (d) Convection

43. Which of the following may not be a source of thermal energy?

(a) Small oven (b) The Sun (c) Moon (d) The heater

44. Heat is transferred by convection in the molecules of the following substances, except ....

(a) milk (b) water (c) air (d) iron

45. Sunlight and the heat of the Sun reach Earth by ....

(a) conduction (b) radiation (c) convection (d) a, c

46. Heat is transferred through solids by.............

(a) radiation only (b) conduction and convection (c) conduction only (d) radiation and convection

47. Meteorologists are scientists who study ....

(a) weather (b) rocks (c) water (d) space

48. To make clothes we can use...........

(a) steel (b) concrete (c) hard fabric (d) flexible fabric

49. Railroad tracks are made up of ....

(a) iron (b) plastic (c) coal (d) glass

50. All the following are properties of steel, except ....

(a) it is a mixture of rock and sand
(b) it is a mixture of iron and other elements.
(c) it is strong material.
(d) it lasts for a long time

Question 02 put (true) or (false)

1. All cells are formed of organelles, each of which performs a different function. ✓
2. Tissue consists of a group of similar cells. ✓
3. Water and wastes are stored in the vacuole. ✓
4. Plant cells and animal cells are completely similar in structure. ✗
5. All living cells contain chloroplasts. ✗
6. Chloroplasts are found in the cells of banana plant leaves. ✓
7. Bacteria and horse are considered as multicellular organisms. ✗
8. Cell biologists are scientists who study rocks. ✗
9. The brain does not respond when feeling stressed. ✗
10. Every system in the body works individually when exposed to danger. ✗
11. Sweat is excreted by the lungs. ✗
12. The skin takes part in expelling sweat through the pores. ✓
13. The muscles of the body work together at the same time ✗
14. A human can control the movement of blood in his body. ✗
15. Muscle cells are short Fibers that allow movement, storage and release of energy. ✗
16. Heat is transferred from a substance of low temperature to a substance of higher temperature. ✗
17. If your body doesn't get rid of waste, you will be healthy. ✗
18. Diabetes disease is one of the disorders of the respiratory system. ✗




19. Muscle cells cannot store and use energy quickly. ✗
20. The heart is important in our body as it helps in food digestion. ✗
21. Exoskeleton gives some insects their shapes. ✓
22. All systems in your body work together in an integrated way. ✓
23. Cobalt is an example of magnetic materials. ✓
24. In series circuits, the electric current can flow in different branches. ✗
25. All materials can be attracted to the magnet ✗
26. If we remove a lamp from the circuit in figure (A), the other lamp still light ✓
27. The magnet has a force called magnetism ✓
28. Magnets attract the non-magnetic materials such as iron, nickel and steel ✗
29. The needle of a galvanometer moves on moving a magnet in and out of a copper coil. ✓
30. When the thermal energy of the objects increases, the kinetic energy of its molecules increases too. ✓
31. Freezing is the transfer of heat due to the movement of a liquid or gaseous substance. ✗
32. Matter in the liquid state has a fixed volume and a variable shape ✓
33. Measuring container is used to measure the temperature of materials. ✗
34. We can measure the temperature by using thermometers. ✓
35. Matter can't be changed from one form to another. ✗
36. Expansion and contraction are two opposite processes. ✓
37. Thermal conductors are good conductors of heat. ✓
38. Expansion and contraction of matter occur due to changes in temperature ✓
39. Molecules of cold or hot substances always move. ✓
40. No spaces are left between railroad tracks. ✗
41. Heat flows from a colder substance to a hotter substance. ✗
42. Thermal energy transfer can occur in only two ways. ✗




43. Sunlight and heat reaching Earth is an example of thermal radiation. 
44. The final temperature is greater than the temperature of two bodies in contact. 
45. Thermal energy is destroyed when it is transferred from one body to another. 
46. Thermal energy is transferred in metals by radiation 
47. The transfer of heat between two bodies stops when the temperature of each is the same. 
48. Metals such as copper and iron allow heat to travel freely through them. 
49. Plastic often resists burning. 
50. In electric iron heat transfers from cloth to iron. ✖

Question 03 Cross the odd word

1. Human - Fish - Plant - Bacteria. — bacteria
2. Urine - Oxygen gas - Carbon dioxide - Sweat. — oxygen gas
3. Plastic - Copper - Iron - Aluminium — plastic
4. Air – Copper – Wood - Glass — copper
5. Oil - Milk - Iron - Vinegar. — iron
6. Conduction - Convection - Friction - Radiation — friction



Question 04 write the scientific term for each of the following

1. A device used to examine very small things. — microscope
2. It is often located at the center of the cell. — Nucleus
3. The are scientists who study cells. — Cell biologists
4. The component of cell that allows water to enter and exit the cell — cell membrane
5. It surrounds the plant cell to give it a definite shape. — cell wall
6. A group of organs that work together to perform a specific function. — System
7. A system that secretes hormones stimulating the rest of the body's systems to respond. — Endocrine system




8	The system which helps the body to move.	Musculoskeletal System
9	The organ that controls the level of sugar in human body	Pancreas
10	A hormone that controls the level of sugar in human body	insulin hormone
11	They are muscles that you can control their movement.	voluntary muscles
12	A disease that is resulting from the disorder of secreting insulin hormone by pancreas.	Diabetes
13	The pattern formed by iron filings near the magnet.	Magnetic field
14	Small electric charges moving in the wires in a closed electrical circuit.	Electric current
15	The materials that are attracted to the magnet.	magnetic materials
16	The materials that the electric charges can flow through.	electric conductors
17	A form of energy produced from generators and turbines.	electricity
18	The area around the magnet in which its force appears.	Magnetic field
19	It is a group of atoms bound together.	Molecule
20	The state of matter which changes into liquid state by heating.	Solid
21	A device used to measure the temperature.	Thermometer
22	A mixture of rock, sand and water which becomes hard after it dries.	Concrete
23	The mass of a substance doesn't change when this substance changes from one state into another.	the law of conservation of mass
24	They are materials that slow down the heat transfer through them	thermal insulator
25	It occurs when heat transfer stops between two objects reach the same temperature.	Thermal equilibrium

Question 05 Give reason for each of the following

1. The cell allows water to go outside it.
   To keep water balance on both sides of the cell membrane
2. Cats are considered as multicellular organism
   Because the bodies of cats consist of many cells
3. Stomach secretes a digestive fluid when the food reaches it.
   To allow more food break down

4. Muscle cells are in the form of long Fibers
   To allow the movement
5. The muscles that surround the eyeball are considered as voluntary muscles
   Because you can control the movement of eyeball muscles
6. Cobalt and nickel are considered as magnetic materials.
   Because they are attracted to the magnet
7. Particles of steam have higher thermal energy than particles of water.
   Because particles of steam move faster than particles of water
8. Engineers use expansion points in the designing of bridges.
   To keep the bridge safe from buckling when they expend at high temperatures
9. You feel heat, when you touch a metal spoon placed in a hot cup of tea.
   Because the metal spoon is a thermal conductor material that allow heat to transfer through it

Question 06 — What happens if ..... ?

1. The animal cell is surrounded by cell wall.
   The animal cell will have definite shape
2. There is much water enters the cell.
   The cell will swell until it bursts
3. The blood does not pass through the two kidneys during its circulation inside the human body.
   The blood will not be filtered from the waste materials and the body get sick
4. The lungs when the diaphragm muscle contracts.
   The lungs take in the air rich in oxygen gas
5. A magnet is approached close to some iron nails mixed with small pieces of paper.
   The magnet will not attract the iron nails but it will not attract the small pieces of paper
6. The force of gravity if the distance between the object and Earth's center increases.
   The force of gravity between them decreases

7. The size of an inflated balloon if it is put in hot weather.
   Its size will increase
8. The level of alcohol inside a thermometer if we put it inside cold
   the alcohol will go down
9. The mass of a piece of butter after melting it
   The mass does not change
10. Molecules' movement of a hotter substance after mixing it with a cooler substance.
   Molecules of hotter substance will move slower after mixing

	Concept 1	Concept 2	Concept 3	Concept 4	Concept 5
Choose	1-9	10-18	19-25	26-40	41-50
Put right or wrong	1-8	9-22	23-29	30-41	42-50
Cross the odd word	1	2	3-4	5	6
Write s- term	1-5	6-12	3-18	19-20	21-25
Give reason	1-2	3-5	6	7-8	9
What happens	1-2	3-4	5-6	7-8	9-10

تم بحمد الله

بسم الله الرحمن الرحيم " إِنَّ الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ إِنَّا لَا نُضِيعُ أَجْرَ مَنْ أَحْسَنَ عَمَلًا " صدق الله العظيم



كيفية طباعة صفحات معينة من ملف معين



مثلا ازاى نطبع الصفحات من صفحة 4 الى صفحة 9

خطوة 1

خطوة 2
اختيار اسم الطابعة بتاعتك

خطوة 3
كتابة الصفحات المراد طباعتها
نكتب رقم 4 ثم نكتب الشرطة دي – ثم نكتب 9

خطوة 4
اختيار نوع الورق

خطوة 5
اختيار A4

خطوة 6

المراجعة رقم (2)







G6 Final Revision on unit 1

Choose the correct answer:

1- Animal cell differs from plant cell in.....................
a) shape only b) structure only
c) shape and structure d) neither shape nor structure.

2- We can see the cell of .... without using a microscope.
a) bacteria b) plant c) human d) bird's egg

3- The body of .... is composed of one cell only.
a) human b) bacteria c) a big tree d) an elephant

4- The microscope must be used to see the structure of all the following cells, except ………………………..
a) plant cells b) human body cells
c) unfertilized bird's egg d) bacteria cells

5- All the following organisms are examples of multicellular organisms, except ………….
a) human b) horse c) bacteria d) apple tree

6- All the following are from parts of microscope, except …………….
a) eyepiece b) stage c) coverslip d) mirror

7- Different focusing power of …….. allow us to see the components of cells.
a) eyepiece b) objective lenses c) coarse focus d) mirror

8- The structure(s) found in the plant cell and not found in animal cell is/are................
a) cell membrane only b) cell wall only.
c) cell wall and chloroplasts d) cell wall and nucleus.

9- The .... is responsible for the entry and exit of water into and out of the cell.
a) cell membrane b) cytoplasm c) nucleus d) Golgi apparatus

10- …………. are different tiny structures inside the cell and each type of them has a special function.
a) Organs b) Systems c) Molecules d) Organelles

11- Which of the following is a list of components of the body system in order from least complex to most complex?

a) tissue, cell, organ, body system.
b) cell, tissue, organ, body system.
c) body system, organ, cell, tissue.
d) organ, tissue, cell, body system.

12- All the following structures are found in onion cells only and not found in fish cells, except ....

a) cell wall b) one sap vacuole c) chloroplasts d) mitochondria

13- The structure of plant cell which is made up of cellulose is the ………..

a) cell wall b) cytoplasm c) nucleus d) chloroplasts

14- All the following animals have bones in their bodies, except.................

a) cats b) dogs c) birds d) insects.

15- All the following parts are from the main parts of animal cell, except ….

a) cell membrane b) cytoplasm c) cell wall d) nucleus

16- …………… is often located at the center of the cell.

a) Cell membrane b) Cytoplasm c) Cell wall d) Nucleus

17- The two cell organelles which are responsible for transportation process are ……………………..

a) mitochondria and Golgi apparatus.
b) endoplasmic reticulum and Golgi apparatus.
c) endoplasmic reticulum and mitochondria.
d) mitochondria and chloroplasts.

18- All the following can be stored inside sap vacuole of plant cell, except.......................

a) energy b) nutrients c) water d) waste materials.

19- To see the structure of a cell under microscope we must color it by using.....................

a) stains b) water c) sunlight d) vinegar.

20- Methylene blue dye helps us to see the................ of the cell as a blue area under microscope.

a) cytoplasm b) Golgi apparatus c) chloroplasts d) nucleus

21- When you feel nervous, your heartbeats increase, this indicates the interaction between.................. systems.

a) digestive and nervous
b) digestive and circulatory
c) nervous and circulatory
d) digestive and respiratory

22- In a dangerous situation, your eyes send the information to the................ to perform the suitable action.

a) brain
b) stomach
c) lungs
d) heart

23- Muscles of stomach and muscles of heart can be controlled by…............. system.

a) digestive
b) circulatory
c) nervous
d) respiratory

24- The nerve cells depend on.............. systems to get their needed nutrients.

a) digestive and respiratory
b) digestive and circulatory
c) circulatory and respiratory
d) circulatory and nervous

25- When you touch a sharp thorn, your hand moves away quickly due to the interaction between nervous system and ……………. in your hand.

a) veins
b) arteries
c) muscles
d) hairs

26- Cells differ from each other in……….................

a) shapes only
b) sizes only
c) shapes and sizes
d) neither shapes nor sizes.

27- The muscle is considered as…………….............

a) a cell
b) a tissue
c) an organ
d) a system.

28- Among the organs of……………… system are muscles and bones.

a) digestive
b) circulatory
c) nervous
d) musculoskeletal

29- When the muscles in front of the upper arm relax and the muscles in the back of the upper arm contract, the forearm moves…….............

a) up towards your shoulder.
b) down towards your shoulder.
c) up away from your shoulder.
d) down away from your shoulder.

30- The contraction of muscles moves the bones in............... direction only.

a) one
b) two
c) three
d) four

31- All the following organs belong to musculoskeletal system, except….........

a) tendons
b) cartilages
c) veins
d) bones.

32- **Among the muscles which you cannot control their movement are……....**

a) hand muscles b) eyelid muscles c) leg muscles d) arm muscles

33- **Among the organs which contain both involuntary and voluntary muscles is the…….............**

a) heart b) arm c) eye d) leg

34- **All the following are involuntary muscles except………….**

a) the muscles of the esophagus b) stomach muscles

c) the muscles of the small intestine d) neck muscles

35- **All the following are skeletal muscles work in pairs, except the…...........**

a) upper arm muscles b) cardiac muscles

c) neck muscles d) forearm muscles

36- **When two muscles work together to carry out a movement, one muscle……………. while the other………………..**

a) moves – stays still b) stays still – relaxes

c) contracts – relaxes d) stays still – contracts

37- **All the following are from types of blood vessels, except……...............**

a) arteries b) heart c) veins d) blood capillaries

38- **Among the organs which belong to respiratory system is……..............**

a) stomach b) heart c) lung d) brain.

39- **The lungs take in air rich in …………………. gas, when the diaphragm muscle………………...**

a) Oxygen – contract b) carbon dioxide – contract

c) Oxygen – relax d) carbon dioxide – relax

40- **All the following are from the nutrients that the food contains, except….**

a) carbohydrates b) oxygen gas c) fats d) proteins.

41- **You can use your.................. muscles to help the teeth chew the food.**

a) eye b) cardiac c) jaw d) hand

42- **In small intestine, ... help(s) in breaking down of food by secreting some enzymes.**

a) pancreas only b) pancreas and lungs

c) gallbladder only d) pancreas and gallbladder

43- The system which helps your teeth and jaw move to chew the food is the………................ system.

a) endocrine b) circulatory c) nervous d) musculoskeletal

44- Absorption of nutrients inside the body starts in the................... organ.

a) large intestine b) small intestine c) mouth d) stomach

45- Walls of small intestine contain .... which responsible for absorbing nutrients of digested food.

a) blood vessels b) hairs c) glands d) nephrons

46- All the following are responsible for excretion process, except…..............

a) digestive system b) skin

c) respiratory system d) urinary system.

47- All the following are from the waste materials which are produced by your body, except…….................

a) urine b) oxygen gas c) carbon dioxide d) sweat.

48- Among the organs which belong to urinary system are…….................

a) stomach and kidneys. b) ureters and gallbladder.

c) kidneys and bladder. d) urethra and heart.

49- The process of expelling urine from the body is called…............ process.

a) urination b) respiration c) digestion d) sensation

50- Urine is expelled outside the body through………………

a) ureters b) anus c) urethra d) bladder

51- Among the substances which can't pass through the kidney's nephrons are……..............

a) blood cells and urea. b) blood cells and proteins.

c) proteins and urea. d) water and urea.

52- Engineers design special devices to work instead of……............... organ which filter the blood from waste materials.

a) stomach b) heart c) kidney d) lung

53- Diabetes disease occurs due to a disturbance in one organ of................ system.

a) respiratory b) nervous c) endocrine d) urinary

54- When we throw a ball upward it returns back to the Earth due to...........
a) gravity only b) electricity and mass
c) magnetism only d) magnetism and electricity.

55- Magnets can be made of................
a) copper b) glass c) iron d) plastic.

56- …………………is a magnetic material that is attracted to the magnet.
a) Copper b) Iron c) Gold d) Wood

57- When we put a piece of aluminum foil close to a magnet, it will…............
a) be attracted to the magnet b) be a magnet
c) not attract to the magnet d) repel with the magnet.

58- All the following materials are called magnetic materials, except.............
a) iron b) plastic c) nickel d) steel

59- Generators are used in…………….........
a) heating water b) generating thermal energy
c) generating electricity d) producing sound energy

60- The flow of electric charges along a closed path causes……...........
a) electric circuit b) light energy
c) electric current d) sound energy

61- Scientists use a ....to detect the flow of small electric currents.
a) generator b) galvanometer c) battery d) switch

62- ....are used to spin the magnet in the generator to produce electricity.
a) Water and wind b) Light and sound
c) Electricity and sound d) Sound and heat

63- The source of electricity in any electric circuit may be……...........
a) a metal wire b) a switch c) a battery d) an electric lamp

64- All the following materials are considered as electric conductors, except…………….........
a) copper b) water c) rubber d) iron.

65- A magnetic field can be formed when electric current flows around…….
a) a plastic tube b) a battery c) a metal core d) a glass core

66- ....is a material that cannot allow electric current to flow through.

a) Iron b) Copper c) Plastic d) Cobalt

67- Which of the following is a poor conductor of electricity and is used to coat wires?

a) A conductor b) an insulator c) A switch d) A battery.

68- When a piece of aluminum is replaced by a piece of wood in an electrical circuit, this causes……………………..

a) current flow b) close the circuit

c) open the circuit d) lighting the lamp

69- ....can be found in toasters and electric stoves to slow the flow of an electric current in the electric circuit.

a) Resistors b) A switch c) Galvanometers d) A battery

70- In the ....circuit, all components are connected in one loop.

a) open parallel b) closed parallel c) open series d) closed series

71- From the conditions for lighting a lamp in an electrical circuit is ……..

a) The presence of a battery in the circuit.

b) There is no insulating material in the circuit path.

c) The key is on. d) All the previous.

72- The artificial pacemaker is inserted into the ....of the human body.

a) brain b) chest c) legs d) hands

73- The artificial pacemaker contains a................... to send information to physicians, so they know the condition of the………..........

a) battery – lung b) motherboard – brain

c) built-in antenna – heart d) battery – heart

Complete the following sentences:

1- The smallest tiny structures that build up all living organism's bodies are ……………………...

2- The number of cells which build up a baby's body is ……………………... than the number of cells which build up his father's body.

3- Growth of a living organism is resulted from increasing the ……………... of cells in its body.

4- The body of ……………………... organisms consists of one cell only, while the body of ……………………... organisms consists of many cells.

5- The modern microscopes help scientists to discover more information about the ……………………....

6- When you examine a piece of onion under microscope using the low power objective lens, you will see the cells of onion in ……………... size.

7- Human body cells need food and ……………... to get ……………... which is needed to do all vital processes.

8- The tissue is composed of a group of ………… that do the same function.

9- Cells of human don't have definite shape due to the absence of …………

10- Nutrients and oxygen enter cells through the ……………………....

11- Plant cell has the ability to make the photosynthesis process due to the presence of ……………………... inside it.

12- ……………………... is the control center of the cell and responsible for controlling formation of ……………………... and cell division.

13- The green color of plants is due to the presence of ……………………... pigment in their cells.

14- Cellulose makes up …………… which is found in …………… cells only.

15- All cell parts which are found inside the cell are floating in …………….

16- Endoplasmic reticulum is collecting and transporting ……………………... inside the cell to build and ……………………... the cell.

17- A cell can transport some materials to another cell with the help of ……………………....

18- …………………... convert sugar inside the cell into the needed energy to make the cell do its vital processes.

19- Animal cell contains many small …………………... which stores …………………..., water and waste materials.

20- Cell biologists use …………………... to magnify cells to appear larger.

21- To see the nucleus of a cell under microscope, we can stain the cell with …………………... dye to appear in …………………... color.

22- Skeletal system takes nutrients from …………………... system for growth of muscles.

23- When you touch a hot cup of tea, …………………... system sends a message to the muscles of your hand to contract.

24- The system which transfers nutrients from the digestive system to the different muscles of the body is the …………………... system.

25- Muscle cells are in the form of long ……………… to allow …………….

26- Bundles of muscle tissues are organized to form the …………………....

27- Your leg moves due to contraction and relaxation of …………………... connected to the bones of leg.

28- Musculoskeletal system consists of two systems which are ……………... system and …………… system that allow the ……………… of the body.

29- Cardiac muscles are type of ………… muscles which form the …………

30- Muscles of eyelid that allow you blink many times in one minute are considered as …………………... muscles, while the muscles that help your eyeball to move in different directions are considered as …………………... muscles.

31- Forearm muscles are considered as …………………... muscles.

32- The lungs take in air when the diaphragm …………………..., while they release the air when the diaphragm …………………....

33- Endocrine system consists of …………………... which secrete ………... that control the increasing of your breathing rate during danger.

34- Circulatory system consists of …………………... and …………………... that allow blood to flow through the body.

35- In dangerous situations, heart pumps more blood which carries ………, …………………..., and ………………. to the muscles and other organs.

36- Respiratory system consists of ………………, ……………and airways.

37- The lungs release the air that rich in …………………... gas, when the …………………... muscle relaxes.

38- When your heartbeats and breathing rate increase, your body sends more …………... blood to the muscles and ……………to face the danger.

39- The …………………... system helps the digestive system during chewing the food by secreting enzymes in mouth.

40- The function of …………………... inside your mouth is softening the food and breaking it down.

41- Undigested food passes to ……………... intestine which absorbs most of …………... from it, leaving the solid waste that is known as …………....

42- Cells can use ………… sugar at once to get their needed energy, and this sugar can be converted into ………… and stored in ……… and muscles.

43- The system that is responsible for excretion of carbon dioxide gas is the …………………... system.

44- Some waste products leave your body in the form of …………………... through your skin.

45- Urinary system removes waste material from the blood in the form of …………………....

46- The two kidneys play an important role in the filtration of ……………... inside your body.

47- Urea is formed due to the breaking down of …………………... inside the body cells.

48- Urine is composed of ……………, ……………and other waste products.

49- The organ which is responsible for secreting insulin hormone is the …………………....

50- Pancreas belongs to …………………... system and its secretions help in completing …………………... process.

51- People that have a problem in secreting insulin hormone will be infected by …………………....

52- The insulin pump device helps diabetics control the …………………... sugar level in the blood with automatic injections of ……………………....

53- The gravity of Earth is affected by two factors which are ……………... and ……………………....

54- By increasing the distance between objects, the …………………... force between them ……………………....

55- Magnetism is an attraction or a …………………...force, while gravity is …………………... force only.

56- Materials are classified according to their ability to be attracted to the magnet into …………………... materials and …………………. materials.

57- Cobalt is an example of …………………... materials.

58- The magnetic materials will be attracted to the magnet when they are located at the …………………... of the magnet.

59- Magnets are used in generators and turbines to generate ……………….

60- In the generator ……………… energy changes into …………… energy.

61- The generator consists of large ……………… and coiled ……………….

62- A moving magnet inside a coiled wire can generate ……………….

63- By increasing the number of loops in the coil, and moving a magnet inside it, the amount of generated electric current will ……………….

64- The relation between magnetism and electricity is used in electric ………………, electric generators and electric ……………….

65- From the components of the electric circuit a ………………, an electric power source, a metal ……………… and an electric device.

66- When the switch is turned off, it ……………..……the circuit, so the …………………..… will not flow through.

67- …………… and …………… are examples of electric insulators, while ………………and …………… are examples of electric conductors.

68- When electric current flows through your body it causes an electric ……………….

69- Electric ……………… are used to stop the flow of electricity.

70- The thermostat in a refrigerator contains an ………………switch.

71- Metallic materials are considered electric ………………, while glass and rubber are considered electric ……………….

72- In ………………circuits, we can turn off or remove one light bulb without affecting the other light bulbs.

73- In ……………… circuits, electric current pass in one loop only, while in ……………… circuits electric current flow through different branches.

74- The normal heart has a natural ……………… which creates electrical current that cause the heart to ……………….

75- To build a pacemaker a ………………, an insulated electric wire and a ……………………… are needed.

Write the scientific term:

1- The main building unit of the living organism's body that can do all vital processes. (……………)

2- A device that is used to see the structure of living organism's cells. (……………)

3- Lenses which are found in microscope and have different magnification power. (……………)

4- Living organisms which contain cell wall in the structure of their cells. (……………)

5- It is the structure which surrounds the animal cell from outside. (……………)

6- The rigid external material that surrounds the cell membrane in plant cell. (……………)

7- It is a gelatinous liquid which is found inside the cell. (……………)

8- The organelles which provide the cell with the needed energy. (……………)

9- An organelle which helps in packing and transporting different materials between the cells and out of the cell. (……………)

10- One big sac-like organelle in the plant cell that stores nutrients, water and waste materials. (……………)

11- **The microscope that helps us to see the top, sides and layers of the cell. (……………)**

12- **They are cells in the form of long fibers to allow movement. (……………)**

13- **It is the organ which contracts and relaxes to help in the movement of the body. (……………)**

14- **They are muscles that attached to the bones of skeletal system to allow their movement. (……………)**

15- **They are muscles that move automatically and you cannot control their movement. (……………)**

16- **They are muscles that you can control their movement. (……………)**

17- **It is the system that secretes hormones to control the body temperature and the blood pressure. (……………)**

18- **The system which helps the respiratory system in transporting oxygen gas from lungs to all the body organs. (……………)**

19- **The system which contains diaphragm muscle that contracts and relaxes many times to increase the breathing rate. (……………)**

20- **The system which converts the complex food into simpler substances that the body can use for energy and growth. (……………)**

21- **A liquid in your mouth which is secreted by endocrine system and contains an enzyme helps in digestion. (……………)**

22- **The organ which belongs to the digestive system and secretes fluids contain an acid and some enzymes. (……………)**

23- **The part of large intestine which stores the feces until it leaves the body. (……………)**

24- **The muscular opening that the feces passes through it to outside the body. (……………)**

25- **It is a system that is responsible for storing and getting rid of waste materials produced from cells. (……………)**

26- **It is a microscopic filter that is found in the two kidneys and filters the blood from urea and other waste materials. (……………)**

27- **A hormone that controls the level of sugar in the human blood.(………)**

28- A device that is used by diabetics to help them control the blood sugar levels with automatic injections of insulin. (...............)

29- The force of Earth which attracts all objects on its surface to its center. (...............)

30- The force that allows the magnet to attract some materials without making direct contact. (...............)

31- The area around the magnet in which its magnetic force appears. (...............)

32- A closed loop through which electric current can flow. (...............)

33- One of the components of an electric circuit that is used to limit the flow of electricity through the circuit. (...............)

34- The type of electric circuits that are found in houses and help in operating devices at the same time. (...............)

35- A device inserted into the chest to stimulate the heart to beat regularly. (...............)

Put (√) or (x):

1- Cell is the building unit of both living organisms and non-living things. ( )

2- We can see the cells of all living organisms with the naked eye. ( )

3- All living organisms are similar in that they are made up of one cell only. ( )

4- The new cells are formed from other cells existed in the body of living organism. ( )

5- All animal cells have a nucleus. ( )

6- All cells have a cell wall in their structure. ( )

7- The cells that build up a fish body are similar to that of onion plant. ( )

8- To see the structure of bacteria, we need to use microscope. ( )

9- Bacteria and horse are considered as multicellular organisms. ( )

10- Human is considered as unicellular organism, because its body consists of many cells. ( )

11- The body of a living organism that contains complex systems consists of many cells. ( )

12- The cell gets its energy from nutrients only. ( )

13- Robert Hooke used his microscope to observe cells of some samples

of plant parts. ( )

14- All objective lenses of microscope have the same focusing power. ( )

15- The function of coarse focus and fine focus is making the image of sample very clear under microscope. ( )

16- All living cells have the same parts which have the same function. ( )

17- Plant cells and animal cells are completely similar in structure. ( )

18- Tissue consists of a group of similar cells. ( )

19- Robert Hooke named the tiny particles that he saw under his microscope with the cell. ( )

20- The cells of monkey are surrounded by cell wall from outside. ( )

21- Cell membrane protects the cell and has the selective permeability feature. ( )

22- There is one big sap vacuole in the cell of onion plant. ( )

23- Cells are very large, as the diameter of an animal cell is about 0.001 cm. ( )

24- All cells are formed of organelles, each of which performs a different function. ( )

25- Chloroplasts are found in the cells of banana plant leaves. ( )

26- All living cells contain chloroplasts. ( )

27- Cellular respiration takes place inside cells by the help of Golgi apparatus. ( )

28- There are many small vacuoles in the cells of a bird. ( )

29- The horse can make its own food due to the presence of chloroplasts in its cells. ( )

30- The 3D microscope can help doctors to treat cancer disease. ( )

31- Cells are usually clear and colorless, so it is easy to see their structures under microscope. ( )

32- Cell biologists work in agriculture to study plant cells and their respond to different environmental factors. ( )

33- All systems in your body work together in an integrated way. ( )

34- In dangerous situations, nervous system only allows your body to face the danger. ( )

35- Digestive system can digest food without the help of nervous system. ( )

36- The interaction between body systems is important in any dangerous situation. ( )

37- The brain does not respond when feeling stressed. ( )
38- Digestive system transfers oxygen gas to all muscles in your body. ( )
39- Muscle cells are short fibers that allow movement. ( )
40- Muscle cells can work alone due to their large sizes. ( )
41- Muscle cells can store and use energy quickly. ( )
42- The body can move by the help of the skeletal system only. ( )
43- Contraction and relaxation of leg muscles allow the bones of leg to move. ( )
44- All muscles can do the function of movement by contraction. ( )
45- The muscles of the body work together at the same time. ( )
46- Musculoskeletal system consists of muscles and bones only. ( )
47- Cardiac muscles contract and relax all the time without stopping. ( )
48- All skeletal muscles are considered as involuntary muscles and work by contraction. ( )
49- Eyes have involuntary muscles only. ( )
50- The heart begins to beat quickly during normal situations. ( )
51- When the heartbeats increase, the blood pressure increases also. ( )
52- A human can control the movement of blood in his body. ( )
53- Blood transports oxygen gas only to all the body organs and tissues. ( )
54- Systems get their needed energy from the food we eat. ( )
55- Glycogen is converted into glucose and stored in liver and muscles. ( )
56- The simple substances must be converted into complex nutrients to be used by the body cells. ( )
57- The acid and enzymes which are secreted inside stomach lead to more breaking down of food. ( )
58- All nutrients that are absorbed from small intestine are stored as fats inside the body. ( )
59- The digested food enters the colon as a soupy mixture. ( )
60- Colon absorbs most of water from the undigested food that leaves the body. ( )
61- In dangerous situations, each system in the body works separately from the other systems. ( )
62- The skin takes part in expelling sweat through the pores. ( )
63- If your body doesn’t get rid of waste, you will be healthy. ( )
64- The two kidneys remove waste materials from the blood. ( )
65- Blood cells and proteins are too small, so they can pass through the

nephrons of kidneys. ( )

66- Kidneys are considered as a filtering system for the blood. ( )

67- Studying a kidney model can save time, money and effort. ( )

68- Diabetes disease is one of the disorders of the respiratory system. ( )

69- If pancreas can't do its function correctly, the sugar level in blood doesn't affect. ( )

70- Gravity and magnetism are similar in that we can't see them. ( )

71- Earth attracts all objects on its surface due to its great mass. ( )

72- All materials can be attracted to the magnet. ( )

73- All magnets can be made of some materials like iron and glass. ( )

74- Magnets attract the non-magnetic materials such as iron, nickel and steel. ( )

75- The magnetic objects are attracted to the magnet at any distance from the magnet. ( )

76- We can use the magnet to separate between iron nails mixed with small pieces of copper. ( )

77- Electricity and magnetism can work together. ( )

78- Electricity is the force that affects all objects that has mass and attracts them towards Earth's center. ( )

79- Electricity can be produced from magnetism. ( )

80- The needle of a galvanometer moves on moving a magnet in and out of copper coil. ( )

81- When a magnet is placed at rest away from copper coil, an electric current will be produced. ( )

82- All metals are electric insulators. ( )

83- Electric wires are covered with plastic to protect us from electric shock. ( )

84- Water is a bad conductor of electricity. ( )

85- To make electric current flow through a circuit, all components must be connected to each other. ( )

86- If your hand touches an insulated wire you will be shocked by electricity. ( )

87- The materials that are used to connect the components of the electric circuit are called electric insulators. ( )

88- Towns and cities are parts of an electric circuit. ( )

89- The electric devices in houses are connected in series circuits. ( )

90- Sometimes electricity can be used to help our body parts to move. ( )

91- The artificial pacemaker should contain a battery to do its function. ( )

Correct the underlined words:

1- The cells that are present in different living organisms are similar. (……………)

2- Your body grows up due to the increase in number of your body bones. (……………)

3- The human body contains about 40 million cells. (……………)

4- Some cells may be large enough to see with our naked eye such as animal cells. (……………)

5- We can see the examined sample in bigger size when using the low power objective lens. (……………)

6- The body of simple living organisms as bacteria consists of ten cells only. (……………)

7- The body of a living organism that contains complex systems consists of one cell only. (……………)

8- Stomach is composed of a group of different organs. (……………)

9- Tissue is composed of different types of organs. (……………)

10- Cell wall surrounds the cell membrane of animal cells. (……………)

11- The cell wall allows water to go inside and outside the cell. (……………)

12- Mitochondria provide the cell with the needed food. (……………)

13- The body of a bird has exoskeleton that gives this bird its definite shape. (……………)

14- Selective permeability feature takes place through the cell wall. (……………)

15- Cell biologists are scientists who study rocks. (……………)

16- When a muscle relaxes, it can exert force. (……………)

17- The skeletal muscles work in pairs and move in same directions. (……………)

18- Heart is made of a type of involuntary muscles known as skeletal muscles. (……………)

19- <u>Respiratory</u> system helps endocrine system in carrying hormones to the muscles and brain of the person. (……………)

20- The system which provides your body with oxygen gas and gets rid of carbon dioxide gas is <u>digestive</u> system. (……………)

21- Blood carries <u>oxygen</u> formed inside small intestine to all the body organs. (……………)

22- The <u>digestion</u> process is necessary to remove the waste products resulting from burning food in cells of your body. (……………)

23- Digestion begins when the food enters <u>esophagus</u>. (……………)

24- When your body needs energy, liver and muscles convert glycogen into <u>fats</u> again. (……………)

25- Inside <u>large intestine</u> enzymes which are secreted from pancreas and gallbladder help in the chemical breakdown of food. (……………)

26- The feces leave the body through a <u>bony</u> opening known as anus. (……………)

27- The organ which is responsible for secreting sweat is the <u>kidney</u>.(……)

28- The main waste product which is expelled by <u>respiratory</u> system is the urea. (……………)

29- When you eat a piece of meat, proteins are broken down and form a waste material known <u>glucose</u>. (……………)

30- The blood which carries the waste materials enters each kidney through a large <u>vein</u>. (……………)

31- Insulin hormone is responsible for regulating the level of <u>proteins</u> in blood. (……………)

32- Researchers are working to develop an artificial <u>liver</u> to pump insulin internally inside the human body. (……………)

33- During the falling down of an object towards Earth's surface, the <u>magnetic</u> force increases. (……………)

34- Gravity attracts any object that has <u>size</u>. (……………)

35- Gravity is a <u>pushing</u> force only. (……………)

36- The magnet has a force called <u>gravity</u>. (……………)

37- Small pieces of paper can be used to see the magnetic field of a magnet. (……………)

38- If we put a wooden spoon near to a magnet it will not attract to it because it is made of magnetic material. (……………)

39- The internal battery on a thermostat can be used in the refrigerator to adjust its temperature. (……………)

40- The electric circuit must contain a source of electricity such as the switch. (……………)

41- All materials allow electric current to flow through them. (……………)

42- In series circuits, the electric current can flow through different branches. (……………)

43- Scientists use an artificial pancreas to stimulate the heart muscle to beat regularly. (……………)

Choose from column (B) what suits it in column (A):

1)

Column A	Column B
1) Selective permeability	a) It helps in collecting and transporting proteins inside the cell.
2) Cytoplasm	b) It helps in packing and transporting different materials
3) Endoplasmic reticulum	c) All other cell parts float in it.
4) Golgi apparatus	d) It is known as powerhouses of the cell.
5) Mitochondria	e) Means that cell membrane controls the substances that can enter or leave the cell.

1	2	3	4	5
………	………	………	………	………

2)

Column A	Column B
1) Cell wall	a) It stores nutrients, water and waste materials inside the plant cell.
2) Chloroplasts	b) It gives some insects their shapes.
3) Sap vacuole	c) It surrounds plant cell to give it a definite shape.
4) Exoskeleton	d) Tiny green granules that absorb the energy of sunlight to make photosynthesis process
5) Chlorophyll	e) They are sac-like organelles that contain chlorophyll pigment.

1	2	3	4	5
....	....	....	....	....

3)

Column A	Column B
1) Digestive system	a) It allows the body to move from place to another.
2) Circulatory system	b) It provides the muscles of heart with its needed food.
3) Nervous system	c) It helps your body gets ready to respond in different situations by secreting hormones.
4) Musculoskeletal system	d) It transmits nutrients from digestive system to the nerve cells.
5) Endocrine system	e) It controls the muscles of stomach.

1	2	3	4	5
....	....	....	....	....

4)

Column A	Column B
1) Cellular respiration process.	a) It's a process in which the body gets rid of waste materials.
2) Photosynthesis process.	b) It's a process of converting sugar inside cell into energy
3) Digestion process.	c) It's a process in which lungs take in oxygen gas and get rid of carbon dioxide gas.
4) Excretion process.	d) It's a process of converting energy from the sun into sugar.
5) Respiration process.	e) It's a process of breaking down the complex food into simpler substances.

1	2	3	4	5
....	....	....	....	....

5)

Column A	Column B
1) Materials that are attracted to the magnet.	a) Electric circuit.
2) The area around the magnet at which the magnetic materials are attracted to the magnet.	b) Non-magnetic materials.
3) Materials that are not attracted to the magnet.	c) Switch.
4) The path for electricity that consists of many components that works together as one system.	d) Magnetic materials.
5) Tool used to open and close the electric circuit.	e) Magnetic field.

1	2	3	4	5
....	....	....	....	....

6)

Column A	Column B
1) Electricity	a) The materials that the electric charges can flow through.
2) Thermostat	b) The flow of electrons through an electric wire.
3) Electric current	c) The materials that don't allow electric current to flow through.
4) Electric conductors	d) A form of energy produced from generators and turbines.
5) Electric insulators	e) It is used to adjust the temperature inside some devices such as the refrigerator.

1	2	3	4	5
....	....	....	....	....

Cross out the odd words:

1) Chloroplasts – Sap vacuole – Cell wall – Animal cell.
2) Bacteria – Plant – Human – Animal.
3) Animal cell – Bacteria cell – Unfertilized bird's egg – Plant cell.
4) Esophagus – Heart – Stomach – Large intestine.
5) Endocrine system – Lungs – Glands – Hormones.
6) Heart – Veins – Ureter – Artery.
7) Lungs – Trachea – Diaphragm – Brain.
8) Urine – Oxygen – Sweat – Carbon dioxide.
9) Gallbladder – Kidneys – Ureter – Urethra.
10) Nickel – Iron – Copper – Cobalt.
11) Iron nail – Plastic spoon – Piece of glass – Wooden clip.
12) Copper - Plastic – Rubber – Wood.
13) Iron nail – Metallic key – Rubber – Copper coin.

Give reasons for:

1) The cell needs energy.

➢ ……………………………………………………………………………

2) The cell allows water to go outside it.

➢ ……………………………………………………………………………

3) You cannot see the body of bacteria with your naked eye.

➢ ……………………………………………………………………………

4) We must rotate the coarse focus and fine focus during examining a sample under microscope.

➢ ……………………………………………………………………………

5) Bacteria are unicellular organisms.

➢ ……………………………………………………………………………

6) Cats are considered as multicellular organisms.

➢ ……………………………………………………………………………

7) Plant cells can make photosynthesis process.

➢ ……………………………………………………………………………

8) Chlorophyll absorbs the energy of the sunlight.

➢ ……………………………………………………………………………

9) Plant cell has a definite shape.

➢ ……………………………………………………………………………

10) Mitochondria act as electric power stations in cities.

➢ ……………………………………………………………………………

11) Both of endoplasmic reticulum and Golgi apparatus are involved in transportation processes inside and outside the cell.

➢ ……………………………………………………………………………

……………………………………………………………………………

12) Vacuoles act as storehouses in cities.

➢ ……………………………………………………………………………

13) We must stain cells before examining them under microscope.

➢ ……………………………………………………………………………

14) **Digestive system helps skeletal system in fracture healing.**

➢ ……………………………………………………………………………

15) **The nerve cells in the nervous system need nutrients.**

➢ ……………………………………………………………………………

16) **The importance of nervous system for the muscles of heart.**

➢ ……………………………………………………………………………

17) **Muscle cells are in the form of long fibers.**

➢ ……………………………………………………………………………

18) **Muscle cells don't work alone.**

➢ ……………………………………………………………………………

19) **Skeletal system cannot do its function without muscular system.**

➢ ……………………………………………………………………………

20) **Cardiac muscles are considered as involuntary muscles.**

➢ ……………………………………………………………………………

21) **Cardiac muscles contract and relax without stopping.**

➢ ……………………………………………………………………………

22) **The muscles that surround the eyeball are considered as voluntary muscles.**

➢ ……………………………………………………………………………

23) **Saliva plays an important role in digestion of food inside the mouth.**

➢ ……………………………………………………………………………

24) **Stomach secretes a digestive fluid when the food reaches it.**

➢ ……………………………………………………………………………

25) **Walls of small intestine contain blood vessels.**

➢ ……………………………………………………………………………

26) **The liver and muscles convert the stored glycogen into glucose sugar.**

➢ ……………………………………………………………………………

27) **The digestive system doesn't share in excretion process.**

➢ ……………………………………………………………………………

28) **The two kidneys contain many nephrons.**

➢ ……………………………………………………………………………

29) **Formation of urea inside the human body.**

➢ ……………………………………………………………………………

30) **Blood cells and proteins cannot pass through the kidney's nephrons.**

➢ ……………………………………………………………………………

31) **People whose kidneys are not working well may get harmed.**

➢ ……………………………………………………………………………

32) **Diabetics must give themselves regular shots of insulin.**
(Some diabetics use insulin pump device.)
(Pancreas secretes insulin hormone in the blood.)

➢ ……………………………………………………………………………

33) **The electric circuit is considered as a system.**

➢ ……………………………………………………………………………

34) **When a ball is thrown into the air, it will stop moving upward and then falls down.**

➢ ……………………………………………………………………………

35) **Gravity and magnetism are different from other forces.**

➢ ……………………………………………………………………………

36) **Cobalt and nickel are considered as magnetic materials.**

➢ ……………………………………………………………………………

37) **Wood and copper are not attracted to the magnet.**

➢ ……………………………………………………………………………

38) **Electric generators have great importance in our life.**

➢ ……………………………………………………………………………

39) **The electric circuit must contain a battery.**

➢ ……………………………………………………………………………

40) **All metals are considered as electric conductors.**

➢ ……………………………………………………………………………

41) **Rubber and plastic don't allow electric current to flow through them.**

➢ ……………………………………………………………………………

42) **Electric wires are wrapped in plastic.**
(Handles of screwdrivers are made of plastic.)

➢ ……………………………………………………………………………

43) The electric current cause electric shock in the human body.

➢ ………………………………………………………………………………

44) Some electric circuits contain resistors.

➢ ………………………………………………………………………………

45) In the parallel circuit, we can turn off or remove one light bulb while the other light bulbs will remain lit.

➢ ………………………………………………………………………………

46) The heart has a natural pacemaker.

➢ ………………………………………………………………………………

What happens if……………….:

1) There is much water enters the cell.

➢ ………………………………………………………………………………

2) The cell does not get its needs of nutrients, oxygen and water.

➢ ………………………………………………………………………………

3) The number of cells is increased in the body of a baby.

➢ ………………………………………………………………………………

4) You examine a sample of plant cells using the high power objective lens of microscope.

➢ ………………………………………………………………………………

5) The animal cell is surrounded by cell wall.

➢ ………………………………………………………………………………

6) There are no bones found in the body of the cat.

➢ ………………………………………………………………………………

7) There are no chloroplasts inside plant cells.

➢ ………………………………………………………………………………

8) Selective permeability feature is absent from cell membrane.

➢ ………………………………………………………………………………

9) There are no mitochondria inside the cell.

➢ ………………………………………………………………………………

10) We don't stain a sample of cheek cells before examining it under microscope.

- ....

11) The muscles found in your leg are damaged.

- ....

12) The cardiac muscles in the human body don't contract and relax for a long period of time.

- ....

13) The diaphragm muscle contracts. (According to the lungs)

- ....

14) Complex nutrients don't convert into simple substances inside body.

- ....

15) Pancreas and gallbladder don't secrete their enzymes in small intestine.

- ....

16) You are exposed to a danger situation. (According to Glycogen that is stored in liver and muscles)

- ....

17) Your body doesn't get rid of waste.

- ....

18) The blood doesn't pass through the two kidneys.

- ....

19) Pancreas doesn't make its function correctly.
(Pancreas can't secrete insulin hormone in the blood of a person.)

- ....

20) The mass of an object increases. (According to the force of gravity)

- ....

21) The distance between the object and Earth's center increases.
(According to the force of gravity)

- ....

22) A magnet is approached close to some iron nails mixed with small pieces of paper.

- ....

23) The magnetic objects are placed at a distance and do not locate at the magnetic field of this magnet.

➢ ……………………………………………………………………………

24) Large magnets spin at a high speed around coiled wires.

➢ ……………………………………………………………………………

25) The switch is closed in the electric circuit.

➢ ……………………………………………………………………………

26) Rubber is used in making electric wires instead of copper.

➢ ……………………………………………………………………………

27) A person touches non insulated electric wire through which an electric current passes.

➢ ……………………………………………………………………………

28) Electric circuits in houses are connected in series.

➢ ……………………………………………………………………………

29) A magnet is moved rapidly inside a coil of wire in a circuit containing galvanometer.

➢ ……………………………………………………………………………

Answer the following questions:

1) Look at the following figure, then complete:

a) This figure represents …………….. cell.

b) Structure number (1) is ……………...

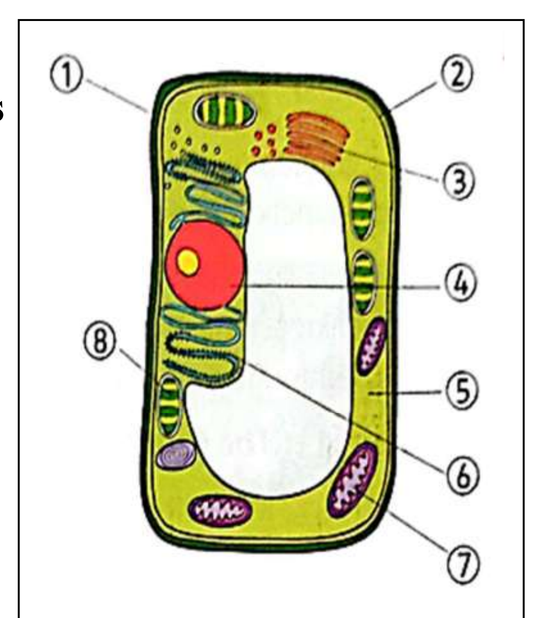
c) Structure number (2) is ……………...

d) Structure number (3) is ……………...

e) Structure number (4) is ……………...

f) Structure number (5) is ……………...

2) Look at the following figure, then complete:



a) This figure represents …………….. cell.

b) Structure number (1) is ………….. that gives the cell its definite ……………..

c) Structure number (2) is …………….. that keeps the water balance on both sides.

d) Structure number (3) is ……………..
that acts as post office of the cell.

e) Structure number (4) is ……….. that acts as the city hall of the cell.

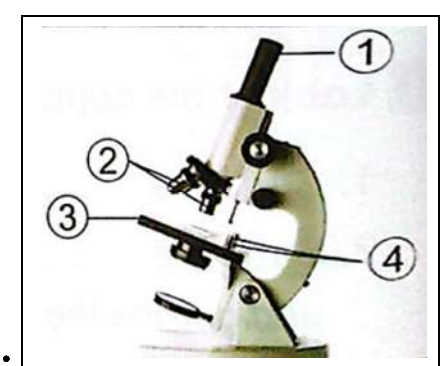
f) Structure number (5) is …………….. in which all organelles float.

g) Structure number (6) is …………….. which acts as the construction workers of the cell.

h) Structure number (7) is …………….. which act as the electrical power station of the cell.

i) Structure number (8) is …………….. which acts as the food factory of the cell.

3) Look at the following figure, then complete:



a) This device is called ……………...

b) Part number …….. is used to fix the slide on part number ……………..

c) Part number ……….. are used to form different degrees of magnified images of examined samples.

4) **Look at the following figure, then complete:**

a) The forearm in figure ………….. moves up toward your shoulder, so muscles in front of the upper arm ………… while muscles in the back of the upper arm ……………...

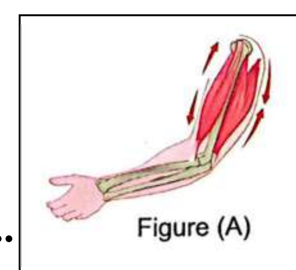


Figure (A)

b) The forearm in figure ……………..moves down away from your shoulder, so muscles in front of the upper arm ………… while muscles in the back of the upper arm ……………...

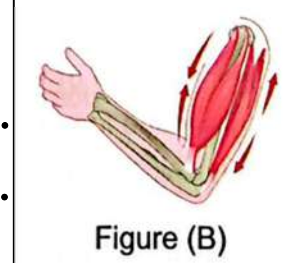
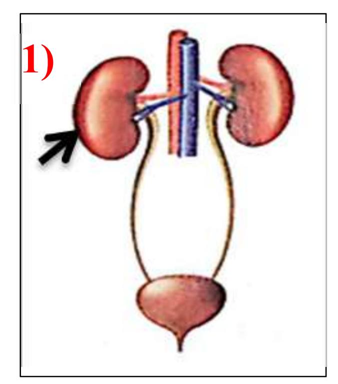
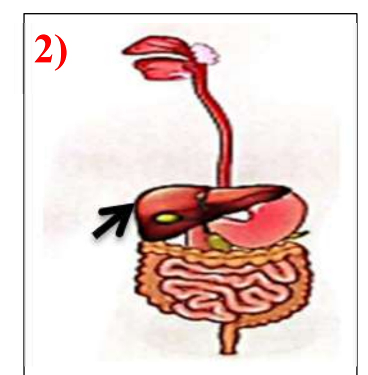


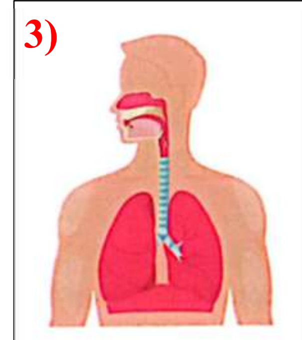
Figure (B)

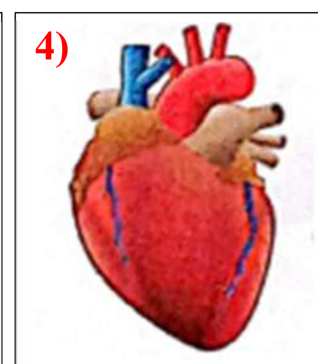
c) Muscles of the upper arm are a type of……….. muscles. (voluntary – involuntary).

5) **Look at the opposite figure, then answer the questions:**

1) 

2) 

3) 

4) 

a) Figure (1) represents the ……………... system.

b) The arrow in figure (1) refers to an organ called ……………...

c) Figure (2) represents the ……………..system.

d) The arrow in figure (2) refers to …………….. which stores …………….. sugar in the form of glycogen.

e) The system in figure (3) carries out two processes which are …………….. and …………….. processes.

f) The organ in figure (4) belongs to …………….. system, and formed of (voluntary – involuntary) muscle called (cardiac – skeletal) muscle.

6) Look at the opposite figure, then answer the questions:

a) Label the figure:

1- ………………...……………….

2- ………………...……………….

3- ………………...……………….

b) This figure indicates that ……………... and ……………... can work together.

7) Look at the opposite figure, then answer the questions:

a) Number (1) is ……………...., and is used to

………………...……………...……………...

b) Number (2) is ……………...., and it is the source of ……………...………………...

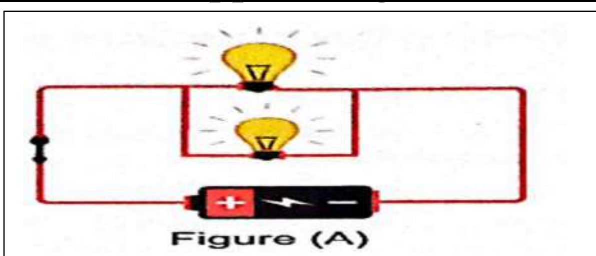
c) Number (3) is ……………...., and it will light if device number ……………... is closed.

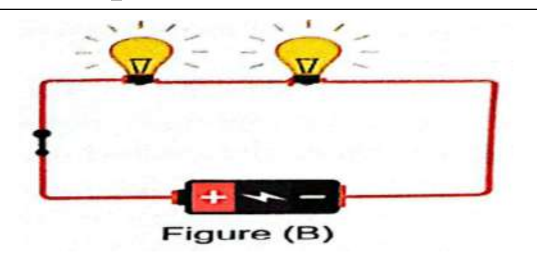
d) Number (4) is ……………...., and it can be made of ……………... which is an electric ……………... but covered with ……………... which is an electric ……………....

e) If some materials such as (Iron nail – plastic spoon – Rubber – Metallic spoon – Piece of wood – Metallic key) are inserted in the circuit, which ones will close the circuit and which will not close it? Give reason?

- **The materials which will close the circuit are ……………...., ……………... and ……………... because they are ……………....**
- **The materials which will not close the circuit are ……………...., ……………... and ……………... because they are ……………....**

8) <u>Look at the opposite figure, then answer the questions</u>:





a) Figure (A) represents a ……………... circuit.

b) Figure (B) represents a ……………... circuit.

c) If we remove a lamp from the circuit in figure ……………..., the other lamp will still lit.

d) If we remove a lamp from the circuit in figure ……………..., the other lamp will turn off.

e) The type of connection in figure ……………... is used in houses.

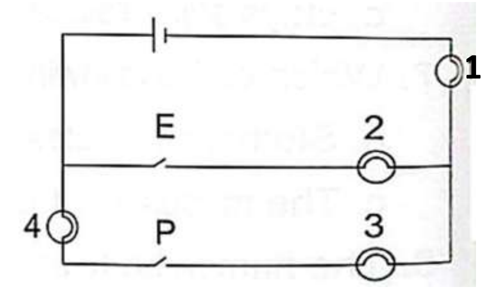
9) <u>Look at the opposite figure, then answer the questions</u>:

a) Which lamps light up only when switch (P) is closed in the following electrical circuit?

➢ Lamps number …………….....

b) Which lamps light up only when switch (E) is closed in the following electrical circuit?

➢ Lamps number …………….....



G6 Final Revision on unit 1 (answered)

Choose the correct answer:

1- Animal cell differs from plant cell in.....................
a) shape only
b) structure only
c) shape and structure
d) neither shape nor structure.

2- We can see the cell of .... without using a microscope.
a) bacteria
b) plant
c) human
d) bird's egg

3- The body of .... is composed of one cell only.
a) human
b) bacteria
c) a big tree
d) an elephant

4- The microscope must be used to see the structure of all the following cells, except …………………………..
a) plant cells
b) human body cells
c) unfertilized bird's egg
d) bacteria cells

5- All the following organisms are examples of multicellular organisms, except ………….
a) human
b) horse
c) bacteria
d) apple tree

6- All the following are from parts of microscope, except …………….
a) eyepiece
b) stage
c) coverslip
d) mirror

7- Different focusing power of …….. allow us to see the components of cells.
a) eyepiece
b) objective lenses
c) coarse focus
d) mirror

8- The structure(s) found in the plant cell and not found in animal cell is/are................
a) cell membrane only
b) cell wall only.
c) cell wall and chloroplasts
d) cell wall and nucleus.

9- The .... is responsible for the entry and exit of water into and out of the cell.
a) cell membrane
b) cytoplasm
c) nucleus
d) Golgi apparatus

10- …………. are different tiny structures inside the cell and each type of them has a special function.
a) Organs
b) Systems
c) Molecules
d) Organelles

11- Which of the following is a list of components of the body system in order from least complex to most complex?

a) tissue, cell, organ, body system.

b) cell, tissue, organ, body system.

c) body system, organ, cell, tissue.

d) organ, tissue, cell, body system.

12- All the following structures are found in onion cells only and not found in fish cells, except ....

a) cell wall b) one sap vacuole c) chloroplasts d) mitochondria

13- The structure of plant cell which is made up of cellulose is the ………..

a) cell wall b) cytoplasm c) nucleus d) chloroplasts

14- All the following animals have bones in their bodies, except................

a) cats b) dogs c) birds d) insects.

15- All the following parts are from the main parts of animal cell, except ….

a) cell membrane b) cytoplasm c) cell wall d) nucleus

16- …………… is often located at the center of the cell.

a) Cell membrane b) Cytoplasm c) Cell wall d) Nucleus

17- The two cell organelles which are responsible for transportation process are ……………………..

a) mitochondria and Golgi apparatus.

b) endoplasmic reticulum and Golgi apparatus.

c) endoplasmic reticulum and mitochondria.

d) mitochondria and chloroplasts.

18- All the following can be stored inside sap vacuole of plant cell, except.......................

a) energy b) nutrients c) water d) waste materials.

19- To see the structure of a cell under microscope we must color it by using.....................

a) stains b) water c) sunlight d) vinegar.

20- Methylene blue dye helps us to see the................ of the cell as a blue area under microscope.

a) cytoplasm b) Golgi apparatus c) chloroplasts d) nucleus

21- When you feel nervous, your heartbeats increase, this indicates the interaction between.................. systems.

a) digestive and nervous
b) digestive and circulatory
c) nervous and circulatory
d) digestive and respiratory

22- In a dangerous situation, your eyes send the information to the............... to perform the suitable action.

a) brain
b) stomach
c) lungs
d) heart

23- Muscles of stomach and muscles of heart can be controlled by…............. system.

a) digestive
b) circulatory
c) nervous
d) respiratory

24- The nerve cells depend on............. systems to get their needed nutrients.

a) digestive and respiratory
b) digestive and circulatory
c) circulatory and respiratory
d) circulatory and nervous

25- When you touch a sharp thorn, your hand moves away quickly due to the interaction between nervous system and ……………. in your hand.

a) veins
b) arteries
c) muscles
d) hairs

26- Cells differ from each other in………...............

a) shapes only
b) sizes only
c) shapes and sizes
d) neither shapes nor sizes.

27- The muscle is considered as…………….............

a) a cell
b) a tissue
c) an organ
d) a system.

28- Among the organs of……………… system are muscles and bones.

a) digestive
b) circulatory
c) nervous
d) musculoskeletal

29- When the muscles in front of the upper arm relax and the muscles in the back of the upper arm contract, the forearm moves….................

a) up towards your shoulder.
b) down towards your shoulder.
c) up away from your shoulder.
d) down away from your shoulder.

30- The contraction of muscles moves the bones in.............. direction only.

a) one
b) two
c) three
d) four

31- All the following organs belong to musculoskeletal system, except….........

a) tendons
b) cartilages
c) veins
d) bones.

32- Among the muscles which you cannot control their movement are……....

a) hand muscles   b) eyelid muscles   c) leg muscles   d) arm muscles

33- Among the organs which contain both involuntary and voluntary muscles is the……..............

a) heart   b) arm   c) eye   d) leg

34- All the following are involuntary muscles except………….

a) the muscles of the esophagus   b) stomach muscles

c) the muscles of the small intestine   d) neck muscles

35- All the following are skeletal muscles work in pairs, except the…............

a) upper arm muscles   b) cardiac muscles

c) neck muscles   d) forearm muscles

36- When two muscles work together to carry out a movement, one muscle……………. while the other………………..

a) moves – stays still   b) stays still – relaxes

c) contracts – relaxes   d) stays still – contracts

37- All the following are from types of blood vessels, except……..............

a) arteries   b) heart   c) veins   d) blood capillaries

38- Among the organs which belong to respiratory system is……..............

a) stomach   b) heart   c) lung   d) brain.

39- The lungs take in air rich in ………………… gas, when the diaphragm muscle………………...

a) Oxygen – contract   b) carbon dioxide – contract

c) Oxygen – relax   d) carbon dioxide – relax

40- All the following are from the nutrients that the food contains, except….

a) carbohydrates   b) oxygen gas   c) fats   d) proteins.

41- You can use your................... muscles to help the teeth chew the food.

a) eye   b) cardiac   c) jaw   d) hand

42- In small intestine, ... help(s) in breaking down of food by secreting some enzymes.

a) pancreas only   b) pancreas and lungs

c) gallbladder only   d) pancreas and gallbladder

43- The system which helps your teeth and jaw move to chew the food is the…………........................ system.

a) endocrine b) circulatory c) nervous d) musculoskeletal

44- Absorption of nutrients inside the body starts in the................... organ.

a) large intestine b) small intestine c) mouth d) stomach

45- Walls of small intestine contain .... which responsible for absorbing nutrients of digested food.

a) blood vessels b) hairs c) glands d) nephrons

46- All the following are responsible for excretion process, except…..............

a) digestive system b) skin

c) respiratory system d) urinary system.

47- All the following are from the waste materials which are produced by your body, except…….................

a) urine b) oxygen gas c) carbon dioxide d) sweat.

48- Among the organs which belong to urinary system are……...............

a) stomach and kidneys. b) ureters and gallbladder.

c) kidneys and bladder. d) urethra and heart.

49- The process of expelling urine from the body is called…........... process.

a) urination b) respiration c) digestion d) sensation

50- Urine is expelled outside the body through………………

a) ureters b) anus c) urethra d) bladder

51- Among the substances which can't pass through the kidney's nephrons are……...............

a) blood cells and urea. b) blood cells and proteins.

c) proteins and urea. d) water and urea.

52- Engineers design special devices to work instead of……............... organ which filter the blood from waste materials.

a) stomach b) heart c) kidney d) lung

53- Diabetes disease occurs due to a disturbance in one organ of................ system.

a) respiratory b) nervous c) endocrine d) urinary

54- When we throw a ball upward it returns back to the Earth due to............
a) gravity only b) electricity and mass
c) magnetism only d) magnetism and electricity.

55- Magnets can be made of.................
a) copper b) glass c) iron d) plastic.

56- ………………….is a magnetic material that is attracted to the magnet.
a) Copper b) Iron c) Gold d) Wood

57- When we put a piece of aluminum foil close to a magnet, it will…............
a) be attracted to the magnet b) be a magnet
c) not attract to the magnet d) repel with the magnet.

58- All the following materials are called magnetic materials, except.............
a) iron b) plastic c) nickel d) steel

59- Generators are used in………………..........
a) heating water b) generating thermal energy
c) generating electricity d) producing sound energy

60- The flow of electric charges along a closed path causes……............
a) electric circuit b) light energy
c) electric current d) sound energy

61- Scientists use a ....to detect the flow of small electric currents.
a) generator b) galvanometer c) battery d) switch

62- ....are used to spin the magnet in the generator to produce electricity.
a) Water and wind b) Light and sound
c) Electricity and sound d) Sound and heat

63- The source of electricity in any electric circuit may be……............
a) a metal wire b) a switch c) a battery d) an electric lamp

64- All the following materials are considered as electric conductors, except………………..........
a) copper b) water c) rubber d) iron.

65- A magnetic field can be formed when electric current flows around…….
a) a plastic tube b) a battery c) a metal core d) a glass core

66- ....is a material that cannot allow electric current to flow through.

a) Iron b) Copper c) Plastic d) Cobalt

67- Which of the following is a poor conductor of electricity and is used to coat wires?

a) A conductor b) an insulator c) A switch d) A battery.

68- When a piece of aluminum is replaced by a piece of wood in an electrical circuit, this causes……………………..

a) current flow b) close the circuit

c) open the circuit d) lighting the lamp

69- ....can be found in toasters and electric stoves to slow the flow of an electric current in the electric circuit.

a) Resistors b) A switch c) Galvanometers d) A battery

70- In the ....circuit, all components are connected in one loop.

a) open parallel b) closed parallel c) open series d) closed series

71- From the conditions for lighting a lamp in an electrical circuit is ……..

a) The presence of a battery in the circuit.

b) There is no insulating material in the circuit path.

c) The key is on. d) All the previous.

72- The artificial pacemaker is inserted into the ....of the human body.

a) brain b) chest c) legs d) hands

73- The artificial pacemaker contains a.................. to send information to physicians, so they know the condition of the…………..........

a) battery – lung b) motherboard – brain

c) built-in antenna – heart d) battery – heart

Complete the following sentences:

1- The smallest tiny structures that build up all living organism's bodies are cells.

2- The number of cells which build up a baby's body is less than the number of cells which build up his father's body.

3- Growth of a living organism is resulted from increasing the number of cells in its body.

4- The body of unicellular organisms consists of one cell only, while the body of multicellular organisms consists of many cells.

5- The modern microscopes help scientists to discover more information about the cell.

6- When you examine a piece of onion under microscope using the low power objective lens, you will see the cells of onion in small size.

7- Human body cells need food and oxygen to get energy which is needed to do all vital processes.

8- The tissue is composed of a group of cells that do the same function.

9- Cells of human don't have definite shape due to the absence of cell wall.

10- Nutrients and oxygen enter cells through the cell membrane.

11- Plant cell has the ability to make the photosynthesis process due to the presence of chloroplasts inside it.

12- Nucleus is the control center of the cell and responsible for controlling formation of proteins and cell division.

13- The green color of plants is due to the presence of chlorophyll pigment in their cells.

14- Cellulose makes up cell wall which is found in plant cells only.

15- All cell parts which are found inside the cell are floating in cytoplasm.

16- Endoplasmic reticulum is collecting and transporting proteins inside the cell to build and repair the cell.

17- A cell can transport some materials to another cell with the help of Golgi apparatus.

18- Mitochondria convert sugar inside the cell into the needed energy to make the cell do its vital processes.
19- Animal cell contains many small vacuoles which stores nutrients, water and waste materials.
20- Cell biologists use microscopes to magnify cells to appear larger.
21- To see the nucleus of a cell under microscope, we can stain the cell with methylene blue dye to appear in blue color.
22- Skeletal system takes nutrients from digestive system for growth of muscles.
23- When you touch a hot cup of tea nervous system sends a message to the muscles of your hand to contract.
24- The system which transfers nutrients from the digestive system to the different muscles of the body is the circulatory system.
25- Muscle cells are in the form of long fibers to allow movement.
26- Bundles of muscle tissues are organized to form the muscle.
27- Your leg moves due to contraction and relaxation of muscles connected to the bones of leg.
28- Musculoskeletal system consists of two systems which are skeletal system and muscular system that allow the movement of the body.
29- Cardiac muscles are type of involuntary muscles which form the heart.
30- Muscles of eyelid that allow you blink many times in one minute are considered as involuntary muscles, while the muscles that help your eyeball to move in different directions are considered as voluntary muscles.
31- Forearm muscles are considered as voluntary muscles.
32- The lungs take in air when the diaphragm contracts, while they release the air when the diaphragm relaxes.
33- Endocrine system consists of glands which secrete hormones that control the increasing of your breathing rate during danger.
34- Circulatory system consists of heart and blood vessels that allow blood to flow through the body.

35- In dangerous situations, heart pumps more blood which carries gases, nutrients, and hormones to the muscles and other organs
36- Respiratory system consists of lungs, diaphragm and airways.
37- The lungs release the air that rich in carbon dioxide gas, when the diaphragm muscle relaxes.
38- When your heartbeats and breathing rate increase, your body sends more oxygenated blood to the muscles and brain to face the danger.
39- The endocrine system helps the digestive system during chewing the food by secreting enzymes in mouth.
40- The function of saliva inside your mouth is softening the food and breaking it down.
41- Undigested food passes to large intestine which absorbs most of water from it, leaving the solid waste that is known as stool.
42- Cells can use glucose sugar at once to get their needed energy, and this sugar can be converted into glycogen and stored in liver and muscles.
43- The system that is responsible for excretion of carbon dioxide gas is the respiratory system.
44- Some waste products leave your body in the form of sweat through your skin.
45- Urinary system removes waste material from the blood in the form of urine.
46- The two kidneys play an important role in the filtration of blood inside your body.
47- Urea is formed due to the breaking down of proteins inside the body cells.
48- Urine is composed of urea, water and other waste products.
49- The organ which is responsible for secreting insulin hormone is the pancreas.
50- Pancreas belongs to endocrine system and its secretions help in completing digestion process.
51- People that have a problem in secreting insulin hormone will be infected by diabetes.

52- The insulin pump device helps diabetics control the glucose sugar level in the blood with automatic injections of insulin.

53- The gravity of Earth is affected by two factors which are mass and distance.

54- By increasing the distance between objects, the gravitational force between them decreases.

55- Magnetism is an attraction or a repulsion force, while gravity is an attraction force only.

56- Materials are classified according to their ability to be attracted to the magnet into magnetic materials and non-magnetic materials.

57- Cobalt is an example of magnetic materials.

58- The magnetic materials will be attracted to the magnet when they are located at the magnetic field of the magnet.

59- Magnets are used in generators and turbines to generate electricity.

60- In the generator mechanical energy changes into electrical energy.

61- The generator consists of large magnet and coiled wires.

62- A moving magnet inside a coiled wire can generate electricity.

63- By increasing the number of loops in the coil, and moving a magnet inside it, the amount of generated electric current will increase.

64- The relation between magnetism and electricity is used in electric motors, electric generators and electric transformers.

65- From the components of the electric circuit a switch, an electric power source, a metal wire and an electric device.

66- When the switch is turned off, it opens the circuit, so the electric current will not flow through.

67- Wood and plastic are examples of electric insulators, while iron and copper are examples of electric conductors.

68- When electric current flows through your body it causes an electric shock.

69- Electric insulators are used to stop the flow of electricity.

70- The thermostat in a refrigerator contains an automatic switch.

71- Metallic materials are considered electric <u>conductors</u>, while glass and rubber are considered electric <u>insulators</u>.

72- In <u>parallel</u> circuits, we can turn off or remove one light bulb without affecting the other light bulbs.

73- In <u>series</u> circuits, electric current pass in one loop only, while in <u>parallel</u> circuits electric current flow through different branches.

74- The normal heart has a natural <u>pacemaker</u> which creates electrical current that cause the heart to <u>contract</u>.

75- To build a pacemaker a <u>battery</u>, an insulated electric wire and a <u>motherboard</u> are needed.

Write the scientific term:

1- The main building unit of the living organism's body that can do all vital processes. (Cell)

2- A device that is used to see the structure of living organism's cells. (Microscope)

3- Lenses which are found in microscope and have different magnification power. (Objective lenses)

4- Living organisms which contain cell wall in the structure of their cells. (Plants)

5- It is the structure which surrounds the animal cell from outside. (Cell membrane)

6- The rigid external material that surrounds the cell membrane in plant cell. (Cell wall)

7- It is a gelatinous liquid which is found inside the cell. (Cytoplasm)

8- The organelles which provide the cell with the needed energy. (Mitochondria)

9- An organelle which helps in packing and transporting different materials between the cells and out of the cell. (Golgi apparatus)

10- One big sac-like organelle in the plant cell that stores nutrients, water and waste materials. (Sap vacuole)

11- The microscope that helps us to see the top, sides and layers of the cell. (3D microscope)

12- They are cells in the form of long fibers to allow movement. (Muscle cells)

13- It is the organ which contracts and relaxes to help in the movement of the body. (Muscles)

14- They are muscles that attached to the bones of skeletal system to allow their movement. (Skeletal muscles)

15- They are muscles that move automatically and you cannot control their movement. (Involuntary muscles)

16- They are muscles that you can control their movement. (Voluntary muscles)

17- It is the system that secretes hormones to control the body temperature and the blood pressure. (Endocrine system)

18- The system which helps the respiratory system in transporting oxygen gas from lungs to all the body organs. (Circulatory system)

19- The system which contains diaphragm muscle that contracts and relaxes many times to increase the breathing rate. (Respiratory system)

20- The system which converts the complex food into simpler substances that the body can use for energy and growth. (Digestive system)

21- A liquid in your mouth which is secreted by endocrine system and contains an enzyme helps in digestion. (Saliva)

22- The organ which belongs to the digestive system and secretes fluids contain an acid and some enzymes. (Stomach)

23- The part of large intestine which stores the feces until it leaves the body. (Rectum)

24- The muscular opening that the feces passes through it to outside the body. (Anus)

25- It is a system that is responsible for storing and getting rid of waste materials produced from cells. (Excretory system)

26- It is a microscopic filter that is found in the two kidneys and filters the blood from urea and other waste materials. (Nephron)

27- A hormone that controls the level of sugar in the human blood. (Insulin)

28- A device that is used by diabetics to help them control the blood sugar levels with automatic injections of insulin. (Insulin pump)

29- The force of Earth which attracts all objects on its surface to its center. (Gravity)

30- The force that allows the magnet to attract some materials without making direct contact. (Magnetism)

31- The area around the magnet in which its magnetic force appears. (Magnetic field)

32- A closed loop through which electric current can flow. (Electric circuit)

33- One of the components of an electric circuit that is used to limit the flow of electricity through the circuit. (Resistor)

34- The type of electric circuits that are found in houses and help in operating devices at the same time. (Parallel circuits)

35- A device inserted into the chest to stimulate the heart to beat regularly. (Artificial pacemaker)

Put (√) or (x):

1- Cell is the building unit of both living organisms and non-living things. (x)

2- We can see the cells of all living organisms with the naked eye. (x)

3- All living organisms are similar in that they are made up of one cell only. (x)

4- The new cells are formed from other cells existed in the body of living organism. (√)

5- All animal cells have a nucleus. (x)

6- All cells have a cell wall in their structure. (x)

7- The cells that build up a fish body are similar to that of onion plant. (x)

8- To see the structure of bacteria, we need to use microscope. (√)

9- Bacteria and horse are considered as multicellular organisms. (x)

10- Human is considered as unicellular organism, because its body consists of many cells. (x)

11- The body of a living organism that contains complex systems consists of many cells. (√)

12- The cell gets its energy from nutrients only. (x)

13- Robert Hooke used his microscope to observe cells of some samples of plant parts. (√)

14- All objective lenses of microscope have the same focusing power. (x)

15- The function of coarse focus and fine focus is making the image of sample very clear under microscope. (√)

16- All living cells have the same parts which have the same function. (x)

17- Plant cells and animal cells are completely similar in structure. (x)

18- Tissue consists of a group of similar cells. (√)

19- Robert Hooke named the tiny particles that he saw under his microscope with the cell. (√)

20- The cells of monkey are surrounded by cell wall from outside. (x)

21- Cell membrane protects the cell and has the selective permeability feature. (√)

22- There is one big sap vacuole in the cell of onion plant. (√)

23- Cells are very large, as the diameter of an animal cell is about 0.001 cm. (x)

24- All cells are formed of organelles, each of which performs a different function. (√)

25- Chloroplasts are found in the cells of banana plant leaves. (√)

26- All living cells contain chloroplasts. (x)

27- Cellular respiration takes place inside cells by the help of Golgi apparatus. (x)

28- There are many small vacuoles in the cells of a bird. (√)

29- The horse can make its own food due to the presence of chloroplasts in its cells. (x)

30- The 3D microscope can help doctors to treat cancer disease. (√)

31- Cells are usually clear and colorless, so it is easy to see their structures under microscope. (x)

32- Cell biologists work in agriculture to study plant cells and their respond to different environmental factors. (√)

33- All systems in your body work together in an integrated way. (√)

34- In dangerous situations, nervous system only allows your body to face the danger. (x)

35- Digestive system can digest food without the help of nervous system. (x)

36- **The interaction between body systems is important in any dangerous situation.** (√)
37- **The brain does not respond when feeling stressed.** (x)
38- **Digestive system transfers oxygen gas to all muscles in your body.** (x)
39- **Muscle cells are short fibers that allow movement.** (x)
40- **Muscle cells can work alone due to their large sizes.** (x)
41- **Muscle cells can store and use energy quickly.** (√)
42- **The body can move by the help of the skeletal system only.** (x)
43- **Contraction and relaxation of leg muscles allow the bones of leg to move.** (√)
44- **All muscles can do the function of movement by contraction.** (√)
45- **The muscles of the body work together at the same time.** (x)
46- **Musculoskeletal system consists of muscles and bones only.** (x)
47- **Cardiac muscles contract and relax all the time without stopping.** (√)
48- **All skeletal muscles are considered as involuntary muscles and work by contraction.** (x)
49- **Eyes have involuntary muscles only.** (x)
50- **The heart begins to beat quickly during normal situations.** (x)
51- **When the heartbeats increase, the blood pressure increases also.** (√)
52- **A human can control the movement of blood in his body.** (x)
53- **Blood transports oxygen gas only to all the body organs and tissues.** (x)
54- **Systems get their needed energy from the food we eat.** (√)
55- **Glycogen is converted into glucose and stored in liver and muscles.** (x)
56- **The simple substances must be converted into complex nutrients to be used by the body cells.** (x)
57- **The acid and enzymes which are secreted inside stomach lead to more breaking down of food.** (√)
58- **All nutrients that are absorbed from small intestine are stored as fats inside the body.** (x)
59- **The digested food enters the colon as a soupy mixture.** (x)
60- **Colon absorbs most of water from the undigested food that leaves the body.** (√)
61- **In dangerous situations, each system in the body works separately from the other systems.** (x)
62- **The skin takes part in expelling sweat through the pores.** (√)
63- **If your body doesn't get rid of waste, you will be healthy.** (x)

64- The two kidneys remove waste materials from the blood. (√)
65- Blood cells and proteins are too small, so they can pass through the nephrons of kidneys. (x)
66- Kidneys are considered as a filtering system for the blood. (√)
67- Studying a kidney model can save time, money and effort. (√)
68- Diabetes disease is one of the disorders of the respiratory system. (x)
69- If pancreas can't do its function correctly, the sugar level in blood doesn't affect. (x)
70- Gravity and magnetism are similar in that we can't see them. (√)
71- Earth attracts all objects on its surface due to its great mass. (√)
72- All materials can be attracted to the magnet. (x)
73- All magnets can be made of some materials like iron and glass. (x)
74- Magnets attract the non-magnetic materials such as iron, nickel and steel. (x)
75- The magnetic objects are attracted to the magnet at any distance from the magnet. (x)
76- We can use the magnet to separate between iron nails mixed with small pieces of copper. (√)
77- Electricity and magnetism can work together. (√)
78- Electricity is the force that affects all objects that has mass and attracts them towards Earth's center. (x)
79- Electricity can be produced from magnetism. (√)
80- The needle of a galvanometer moves on moving a magnet in and out of copper coil. (√)
81- When a magnet is placed at rest away from copper coil, an electric current will be produced. (x)
82- All metals are electric insulators. (x)
83- Electric wires are covered with plastic to protect us from electric shock. (√)
84- Water is a bad conductor of electricity. (x)
85- To make electric current flow through a circuit, all components must be connected to each other. (√)
86- If your hand touches an insulated wire you will be shocked by electricity. (x)
87- The materials that are used to connect the components of the electric circuit are called electric insulators. (x)
88- Towns and cities are parts of an electric circuit. (√)

89- The electric devices in houses are connected in series circuits. (x)
90- Sometimes electricity can be used to help our body parts to move. (√)
91- The artificial pacemaker should contain a battery to do its function. (√)

Correct the underlined words:

1- The cells that are present in different living organisms are similar. (different)
2- Your body grows up due to the increase in number of your body bones. (cells)
3- The human body contains about 40 million cells. (trillion)
4- Some cells may be large enough to see with our naked eye such as animal cells. (unfertilized bird egg)
5- We can see the examined sample in bigger size when using the low power objective lens. (high power)
6- The body of simple living organisms as bacteria consists of ten cells only. (one cell)
7- The body of a living organism that contains complex systems consists of one cell only. (many cells)
8- Stomach is composed of a group of different organs. (tissues)
9- Tissue is composed of different types of organs. (System)
10- Cell wall surrounds the cell membrane of animal cells. (plant)
11- The cell wall allows water to go inside and outside the cell. (cell membrane)
12- Mitochondria provide the cell with the needed food. (energy)
13- The body of a bird has exoskeleton that gives this bird its definite shape. (bones)
14- Selective permeability feature takes place through the cell wall. (cell membrane)
15- Cell biologists are scientists who study rocks. (cells)
16- When a muscle relaxes, it can exert force. (contracts)

17- The skeletal muscles work in pairs and move in <u>same</u> directions. (opposite)

18- Heart is made of a type of involuntary muscles known as <u>skeletal</u> muscles. (cardiac)

19- <u>Respiratory</u> system helps endocrine system in carrying hormones to the muscles and brain of the person. (Circulatory)

20- The system which provides your body with oxygen gas and gets rid of carbon dioxide gas is <u>digestive</u> system. (respiratory)

21- Blood carries <u>oxygen</u> formed inside small intestine to all the body organs. (nutrients)

22- The <u>digestion</u> process is necessary to remove the waste products resulting from burning food in cells of your body. (excretion)

23- Digestion begins when the food enters <u>esophagus</u>. (mouth)

24- When your body needs energy, liver and muscles convert glycogen into <u>fats</u> again. (glucose)

25- Inside <u>large intestine</u> enzymes which are secreted from pancreas and gallbladder help in the chemical breakdown of food. (small intestine)

26- The feces leave the body through a <u>bony</u> opening known as anus. (muscular)

27- The organ which is responsible for secreting sweat is the <u>kidney</u>. (skin)

28- The main waste product which is expelled by <u>respiratory</u> system is the urea. (urinary)

29- When you eat a piece of meat, proteins are broken down and form a waste material known <u>glucose</u>. (urea)

30- The blood which carries the waste materials enters each kidney through a large <u>vein</u>. (artery)

31- Insulin hormone is responsible for regulating the level of <u>proteins</u> in blood. (glucose sugar)

32- Researchers are working to develop an artificial <u>liver</u> to pump insulin internally inside the human body. (pancreas)

33- During the falling down of an object towards Earth's surface, the <u>magnetic</u> force increases. (gravitational)

34- Gravity attracts any object that has size. (mass)

35- Gravity is a pushing force only. (pulling)

36- The magnet has a force called gravity. (magnetism)

37- Small pieces of paper can be used to see the magnetic field of a magnet. (iron filings)

38- If we put a wooden spoon near to a magnet it will not attract to it because it is made of magnetic material. (non-magnetic)

39- The internal battery on a thermostat can be used in the refrigerator to adjust its temperature. (switch)

40- The electric circuit must contain a source of electricity such as the switch. (battery)

41- All materials allow electric current to flow through them. (metals)

42- In series circuits, the electric current can flow through different branches. (parallel)

43- Scientists use an artificial pancreas to stimulate the heart muscle to beat regularly. (pacemaker)

Choose from column (B) what suits it in column (A):

1)

Column A	Column B
1) Selective permeability	a) It helps in collecting and transporting proteins inside the cell.
2) Cytoplasm	b) It helps in packing and transporting different materials
3) Endoplasmic reticulum	c) All other cell parts float in it.
4) Golgi apparatus	d) It is known as powerhouses of the cell.
5) Mitochondria	e) Means that cell membrane controls the substances that can enter or leave the cell.

1	2	3	4	5
e	c	a	b	d

2)

Column A	Column B
1) Cell wall	a) It stores nutrients, water and waste materials inside the plant cell.
2) Chloroplasts	b) It gives some insects their shapes.
3) Sap vacuole	c) It surrounds plant cell to give it a definite shape.
4) Exoskeleton	d) Tiny green granules that absorb the energy of sunlight to make photosynthesis process
5) Chlorophyll	e) They are sac-like organelles that contain chlorophyll pigment.

1	2	3	4	5
c	e	a	b	d

3)

Column A	Column B
1) Digestive system	a) It allows the body to move from place to another.
2) Circulatory system	b) It provides the muscles of heart with its needed food.
3) Nervous system	c) It helps your body gets ready to respond in different situations by secreting hormones.
4) Musculoskeletal system	d) It transmits nutrients from digestive system to the nerve cells.
5) Endocrine system	e) It controls the muscles of stomach.

1	2	3	4	5
b	d	e	a	c

4)

Column A	Column B
1) Cellular respiration process.	a) It's a process in which the body gets rid of waste materials.
2) Photosynthesis process.	b) It's a process of converting sugar inside cell into energy
3) Digestion process.	c) It's a process in which lungs take in oxygen gas and get rid of carbon dioxide gas.
4) Excretion process.	d) It's a process of converting energy from the sun into sugar.
5) Respiration process.	e) It's a process of breaking down the complex food into simpler substances.

1	2	3	4	5
b	d	e	a	c

5)

Column A	Column B
1) Materials that are attracted to the magnet.	a) Electric circuit.
2) The area around the magnet at which the magnetic materials are attracted to the magnet.	b) Non-magnetic materials.
3) Materials that are not attracted to the magnet.	c) Switch.
4) The path for electricity that consists of many components that works together as one system.	d) Magnetic materials.
5) Tool used to open and close the electric circuit.	e) Magnetic field.

1	2	3	4	5
d	e	b	a	c

6)

Column A	Column B
1) Electricity	a) The materials that the electric charges can flow through.
2) Thermostat	b) The flow of electrons through an electric wire.
3) Electric current	c) The materials that don't allow electric current to flow through.
4) Electric conductors	d) A form of energy produced from generators and turbines.
5) Electric insulators	e) It is used to adjust the temperature inside some devices such as the refrigerator.

1	2	3	4	5
d	e	b	a	c

Cross out the odd words:

1) Chloroplasts – Sap vacuole – Cell wall – <u>Animal cell</u>.

2) <u>Bacteria</u> – Plant – Human – Animal.

3) Animal cell – Bacteria cell – <u>Unfertilized bird's egg</u> – Plant cell.

4) Esophagus – <u>Heart</u> – Stomach – Large intestine.

5) Endocrine system – <u>Lungs</u> – Glands – Hormones.

6) Heart – Veins – <u>Ureter</u> – Artery.

7) Lungs – Trachea – Diaphragm – <u>Brain</u>.

8) Urine – <u>Oxygen</u> – Sweat – Carbon dioxide.

9) <u>Gallbladder</u> – Kidneys – Ureter – Urethra.

10) Nickel – Iron – <u>Copper</u> – Cobalt.

11) <u>Iron nail</u> – Plastic spoon – Piece of glass – Wooden clip.

12) <u>Copper</u> - Plastic – Rubber – Wood.

13) Iron nail – Metallic key – <u>Rubber</u> – Copper coin.

Give reasons for:

1) The cell needs energy.
   - To carry out all its life activities to survive.
2) The cell allows water to go outside it.
   - To keep the water balance on both sides of the cell membrane.
3) You cannot see the body of bacteria with your naked eye.
   - Because the body of bacteria consists of one cell only which is very small.
4) We must rotate the coarse focus and fine focus during examining a sample under microscope.
   - To see a clear image for the sample on the slide.
5) Bacteria are unicellular organisms.
   - Because the body of bacteria consists of one cell only.
6) Cats are considered as multicellular organisms.
   - Because the bodies of cats consists of many cells.
7) Plant cells can make photosynthesis process.
   - Due to the presence of chloroplasts in the plant cells.
8) Chlorophyll absorbs the energy of the sunlight.
   - To make the food of the plant through the photosynthesis process.
9) Plant cell has a definite shape.
   - Because the plant cell is surrounded by cell wall.
10) Mitochondria act as electric power stations in cities.
    - Because mitochondria provide the cell with its needed energy.
11) Both of endoplasmic reticulum and Golgi apparatus are involved in transportation processes inside and outside the cell.
    - Because endoplasmic reticulum transports proteins inside the cell, while Golgi apparatus transports different materials between the cells and out of the cell.
12) Vacuoles act as storehouses in cities.
    - Because they store nutrients, water and waste materials inside the cell.
13) We must stain cells before examining them under microscope.
    - Because cells are usually clear and colorless.

14) **Digestive system helps skeletal system in fracture healing.**

- **Because digestive system provides the skeletal system with nutrients.**

15) **The nerve cells in the nervous system need nutrients.**

- **To get energy needed to perform their functions.**

16) **The importance of nervous system for the muscles of heart.**

- **Because the nervous system controls the movement of muscles of heart.**

17) **Muscle cells are in the form of long fibers.**

- **To allow the movement.**

18) **Muscle cells don't work alone.**

- **Because they have very small size.**

19) **Skeletal system cannot do its function without muscular system.**

- **Because the skeletal muscles allow bones to move.**

20) **Cardiac muscles are considered as involuntary muscles.**

- **Because they move automatically and you cannot control their movement.**

21) **Cardiac muscles contract and relax without stopping.**

- **To allow the heart pumps the blood to all the body cells.**

22) **The muscles that surround the eyeball are considered as voluntary muscles.**

- **Because you can control their movement.**

23) **Saliva plays an important role in digestion of food inside the mouth.**

- **Because Saliva soften the food and contain enzymes that help in chemical breakdown of food.**

24) **Stomach secretes a digestive fluid when the food reaches it.**

- **To allow more food breakdown.**

25) **Walls of small intestine contain blood vessels.**

- **To absorb nutrients then carry them to all the body parts.**

26) **The liver and muscles convert the stored glycogen into glucose sugar.**

- **To provide the body with its needed energy.**

27) **The digestive system doesn't share in excretion process.**

- **Because it doesn't remove the waste materials produced from burning food inside the body cells.**

28) The two kidneys contain many nephrons.

- To filter the blood and remove harmful substances from the body.

29) Formation of urea inside the human body.

- Due to the breakdown of proteins inside the body cells.

30) Blood cells and proteins cannot pass through the kidney's nephrons.

- Because blood cells and proteins have large size.

31) People whose kidneys are not working well may get harmed.

- Because they can't filter the blood and can't remove harmful substances from the body.

32) Diabetics must give themselves regular shots of insulin.
(Some diabetics use insulin pump device.)
(Pancreas secretes insulin hormone in the blood.)

- To regulate the sugar level in blood.

33) The electric circuit is considered as a system.

- Because the electric circuit is a path for electricity that consists of many components that work together as one system.

34) When a ball is thrown into the air, it will stop moving upward and then falls down.

- Due to the gravity force of Earth.

35) Gravity and magnetism are different from other forces.

- Because it isn't necessary for objects to come into contact with one another to get affected by them.

36) Cobalt and nickel are considered as magnetic materials.

- Because they are attracted to the magnet.

37) Wood and copper are not attracted to the magnet.

- Because they are non-magnetic materials.

38) Electric generators have great importance in our life.

- Because they are used in generating electricity which is used in lighting houses and operating electrical devices.

39) The electric circuit must contain a battery.

- Because the battery is the source of electricity in the electric circuit.

40) All metals are considered as electric conductors.

- Because they allow electric current to flow through them easily.

41) Rubber and plastic don't allow electric current to flow through them.

- Because they are bad conductors of electricity.

42) Electric wires are wrapped in plastic.
(Handles of screwdrivers are made of plastic.)

- Because plastic is an electric insulator to protect people from electric shock.

43) The electric current cause electric shock in the human body.

- Because it contains a lot of water that is good conductor of electricity.

44) Some electric circuits contain resistors.

- Because resistors are used to slow the flow of electrons through an electric circuit to avoid the damage of its components.

45) In the parallel circuit, we can turn off or remove one light bulb while the other light bulbs will remain lit.

- Because in the parallel circuit, the electric current can flow along different branches.

46) The heart has a natural pacemaker.

- To create electrical currents that it sends out through the heart, causing the heart to contract.

What happens if……………….:

1) There is much water enters the cell.

- The cell will swell until it bursts.

2) The cell does not get its needs of nutrients, oxygen and water.

- The cell can't get its needed energy and will die.

3) The number of cells is increased in the body of a baby.

- The body of the baby will grow.

4) You examine a sample of plant cells using the high power objective lens of microscope.

- You will see the cells in large size.

5) The animal cell is surrounded by cell wall.

- The animal cell will have a definite shape.

6) **There are no bones found in the body of the cat.**
- **The body of the cat will not have a definite shape.**

7) **There are no chloroplasts inside plant cells.**
- **Plant cells can’t make photosynthesis process.**

8) **Selective permeability feature is absent from cell membrane.**
- **They cell can’t control the substances that enter or leave it.**

9) **There are no mitochondria inside the cell.**
- **Cellular respiration process will not happen, and the cell can’t get its needed energy.**

10) **We don't stain a sample of cheek cells before examining it under microscope.**
- **It will be difficult to see the structures inside the cell.**

11) **The muscles found in your leg are damaged.**
- **The leg cannot move.**

12) **The cardiac muscles in the human body don't contract and relax for a long period of time.**
- **The heart cannot pump the blood to all the body cells and the human will die.**

13) **The diaphragm muscle contracts. (According to the lungs)**
- **The lungs take in the air rich in oxygen gas.**

14) **Complex nutrients don't convert into simple substances inside body.**
- **The body cells can’t get energy.**

15) **Pancreas and gallbladder don't secrete their enzymes in small intestine.**
- **The chemical breakdown of food will not happen.**

16) **You are exposed to a danger situation. (According to Glycogen that is stored in liver and muscles)**
- **Glycogen is converted again into glucose sugar.**

17) **Your body doesn't get rid of waste.**
- **The body will get sick.**

18) **The blood doesn't pass through the two kidneys.**
- **The blood will not be filtered from the waste materials and the body will get sick.**

19) **Pancreas doesn't make its function correctly.**
(Pancreas can’t secrete insulin hormone in the blood of a person.)
- **The person will be infected with diabetes disease.**

20) **The mass of an object increases. (According to the force of gravity)**
- **The force of gravity between it and Earth will increase.**

21) **The distance between the object and Earth's center increases.**
(According to the force of gravity)
- **The force of gravity between them will decrease.**

22) **A magnet is approached close to some iron nails mixed with small pieces of paper.**
- **The magnet will attract the iron nails but it will not attract the small pieces of paper.**

23) **The magnetic objects are placed at a distance and do not locate at the magnetic field of this magnet.**
- **They will not be attracted to the magnet.**

24) **Large magnets spin at a high speed around coiled wires.**
- **Electricity is produced.**

25) **The switch is closed in the electric circuit.**
- **The electric circuit will be closed, so the electric current flows through the circuit.**

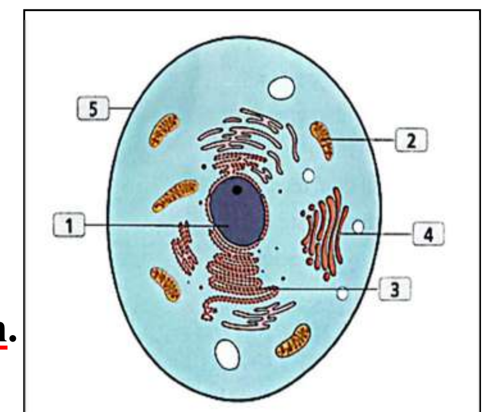
26) **Rubber is used in making electric wires instead of copper.**
- **The electric current will not flow through the wire.**

27) **A person touches non insulated electric wire through which an electric current passes.**
- **He will be shocked by electricity.**

28) **Electric circuits in houses are connected in series.**
- **If one device or bulb turn off or is disconnected, the others will not work.**

29) **A magnet is moved rapidly inside a coil of wire in a circuit containing galvanometer.**
- **The needle of the galvanometer will move rapidly and the generated electric current will increase.**

Answer the following questions:



1) Look at the following figure, then complete:

a) This figure represents an animal cell.

b) Structure number (1) is nucleus.

c) Structure number (2) is mitochondria.

d) Structure number (3) is endoplasmic reticulum.

e) Structure number (4) is Golgi apparatus.

f) Structure number (5) is cell membrane.

2) Look at the following figure, then complete:

a) This figure represents plant cell.

b) Structure number (1) is cell wall that gives the cell its definite shape.

c) Structure number (2) is cell membrane that keeps the water balance on both sides.

d) Structure number (3) is Golgi apparatus that acts as post office of the cell.

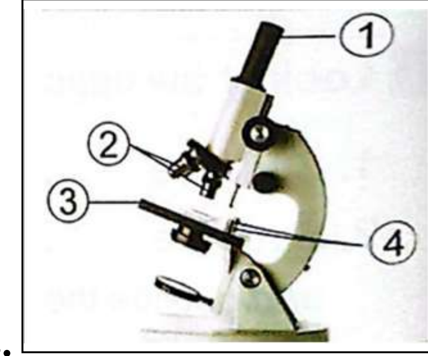
e) Structure number (4) is nucleus that acts as the city hall of the cell.

f) Structure number (5) is cytoplasm in which all organelles float.

g) Structure number (6) is endoplasmic reticulum which acts as the construction workers of the cell.

h) Structure number (7) is mitochondria which act as the electrical power station of the cell.

i) Structure number (8) is chloroplast which acts as the food factory of the cell.



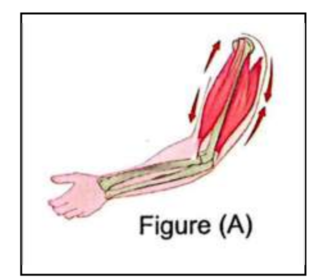
3) Look at the following figure, then complete:

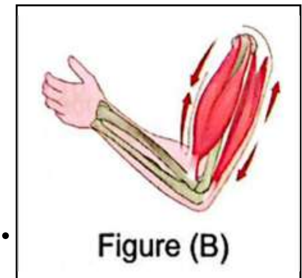
a) This device is called microscope.

b) Part number (4) is used to fix the slide on part number (3)

c) Part number (2) are used to form different degrees of magnified images of examined samples.

4) Look at the following figure, then complete:


Figure (A)

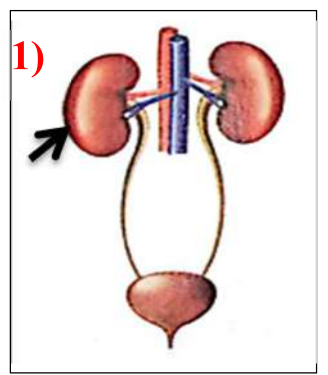

Figure (B)

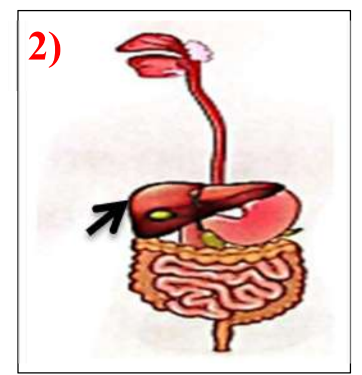
a) The forearm in figure (B) moves up toward your shoulder, so muscles in front of the upper arm contract while muscles in the back of the upper arm relax.

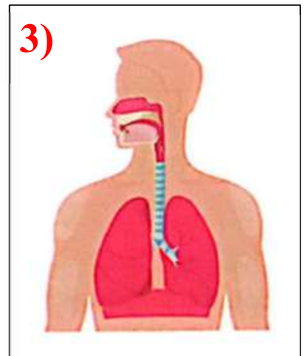
b) The forearm in figure (A) moves down away from your shoulder, so muscles in front of the upper arm relax while muscles in the back of the upper arm contract.

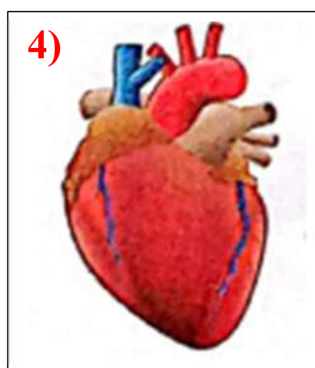
c) Muscles of the upper arm are a type of……….. muscles. (voluntary – involuntary).

5) Look at the opposite figure, then answer the questions:

1) 

2) 

3) 

4) 

a) Figure (1) represents the urinary system.

b) The arrow in figure (1) refers to an organ called kidney.

c) Figure (2) represents the digestive system.

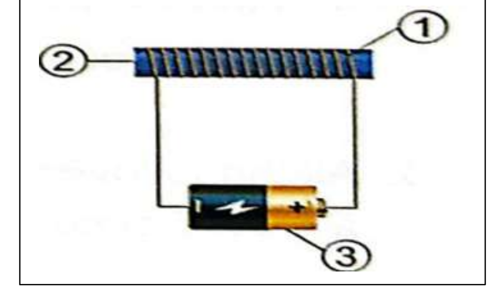
d) The arrow in figure (2) refers to liver which stores glucose sugar in the form of glycogen.

e) The system in figure (3) carries out two processes which are respiration and excretion processes.

f) The organ in figure (4) belongs to circulatory system, and formed of (voluntary – involuntary) muscle called (cardiac – skeletal) muscle.

6) Look at the opposite figure, then answer the questions:

a) Label the figure:



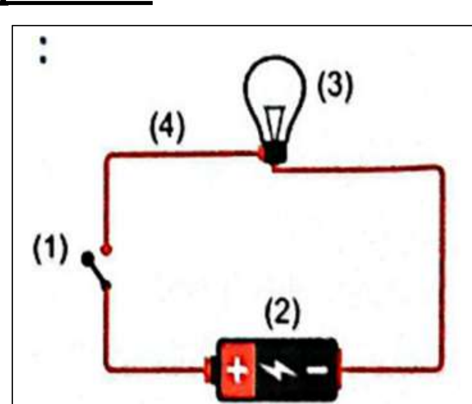
1- Copper wire.

2- Metallic core.

3- Battery.

b) This figure indicates that electricity and magnetism can work together.

7) Look at the opposite figure, then answer the questions:



a) Number (1) is switch, and is used to open and close the electric circuit.

b) Number (2) is battery, and it is the source of electricity.

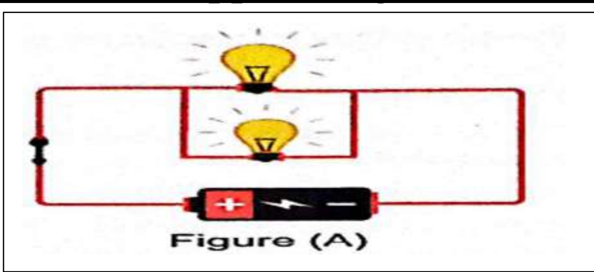
c) Number (3) is lamp, and it will light if device number (1) is closed.

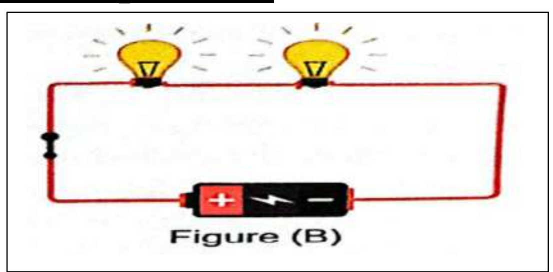
d) Number (4) is wire, and it can be made of copper which is an electric conductor but covered with plastic which is an electric insulator.

e) If some materials such as (Iron nail – plastic spoon – Rubber – Metallic spoon – Piece of wood – Metallic key) are inserted in the circuit, which ones will close the circuit and which will not close it? Give reason?

- The materials which will close the circuit are iron nail, metallic spoon and metallic key, because they are electric conductors.
- The materials which will not close the circuit are plastic spoon, rubber and piece of wood, because they are electric insulators.

8) Look at the opposite figure, then answer the questions:





a) Figure (A) represents a parallel circuit.

b) Figure (B) represents a series circuit.

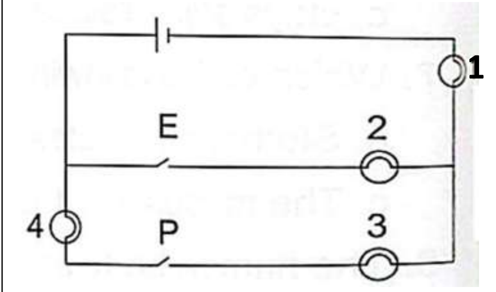
c) If we remove a lamp from the circuit in figure (A), the other lamp will still lit.

d) If we remove a lamp from the circuit in figure (B), the other lamp will turn off.

e) The type of connection in figure (A) is used in houses.

9) Look at the opposite figure, then answer the questions:

a) Which lamps light up only when switch (P) is closed in the following electrical circuit?



- Lamps number 1, 3 and 4.

b) Which lamps light up only when switch (E) is closed in the following electrical circuit?

- Lamps number 1 and 2.

G6 Final Revision on unit 2

Choose the correct answer:

1- Particles of all the following substances have a lot of energy, except...........
a) oxygen b) carbon dioxide c) water vapor d) glass

2- Thermal energy affects...................and....................... of a matter.
a) temperature – state b) temperature – color
c) color – taste d) color – smell

3- The...................energy is related to the motion of particles of a matter.
a) chemical b) potential c) light d) thermal

4- The transfer of............................energy is called heat.
a) chemical b) potential c) kinetic d) thermal

5- The state of matter in which its particles has the highest thermal energy is……………………….state.
a) solid b) liquid c) ice d) gas

6- Melting process is the reverse process of…………………
a) boiling b) freezing c) evaporation d) condensation

7- During ………………..processes, the molecules absorb thermal energy and move faster.
a) melting and freezing b) freezing and condensation
c) melting and evaporation d) melting and condensation

8- The temperature……..............during the melting of solids.
a) decreases b) increases c) doesn't change d) may increase or decrease

9- Water molecules have the lowest kinetic energy when it is in the form of……………………
a) ice b) water drops c) water vapor d) steam

10- Objects with more thermal energy have......................kinetic energy.
a) more b) less c) the same d) no

11- The process in which liquid molecules move slower and change to another state is………….
a) melting b) freezing c) evaporation d) condensation

12- By decreasing the temperature of a substance, its molecules move………. each other and the spaces between them................

a) farther away — increase. b) nearer to — increase.

c) farther away — decrease. d) nearer to — decrease.

13- As a result of heat flow through metals, they…………............

a) expand b) contract c) get smaller d) are not affected

14- Raising the temperature of materials can cause…..............

a) freezing and expansion b) condensation and contraction

c) melting and expansion d) melting and contraction

15- When the thermometer that contains a colored alcohol is placed in hot water, the alcohol…………….........

a) contracts b) evaporates c) changes its color d) expands

16- When the temperature of a rod of iron is increased, its length……..........

a) increases b) decreases to its half

c) doesn't change d) decreases to its quarter

17- A metallic rod of 50 meter length was heated at high temperature, its length could reach………............meter after heating.

a) 47 b) 48 c) 49 d) 51

18- Expansion and contraction of liquids explain how a………….works.

a) thermometer b) balance c) scale d) galvanometer

19- When the kinetic energy of liquids decreases, they may……..............

a) expand b) contract c) evaporate d) disappear

20- ....happens as a result of the separation of the particles of a substance when heat is transferred to it.

a) Contraction b) Expansion c) Growth d) Freezing point

21- Expansion joints are designed to allow concrete……..................when temperature……...............to keep bridges safe from buckling.

a) expands - decreases b) expands - increases

c) contract - increase d) contract - doesn't change

22- A tightly closed metal lid of a glass bottle can be opened more easily if it is put in...................for some time.

a) cold water b) iced water c) vinegar d) hot water

23- Metallic parts of a bridge……...............in different temperatures.

a) expand only **b) expand and contract**

c) contract only **d) never expand or contract**

24- Railroad tracks are made up of……….............

a) glass **b) coal** **c) plastic** **d) iron.**

25- Which of the following may not be a source of thermal energy?

a) Small oven **b) The Sun** **c) Moon** **d) The heater**

26- If heat transfers to a lower temperature object, its molecules will............

a) stop moving **b) move slower**

c) move faster **d) not be affected.**

27- If you hold an ice cube in your hand, the molecules of ice will………..

a) stop moving **b) move slower**

c) move faster **d) not be affected.**

28- The average temperature is almost……...............the final temperature of the mixture of two substances with different temperatures.

a) more than **b) less than** **c) equal to** **d) double**

29- If you pour a cup of water with temperature 30°C to another cup of water with temperature 80°C, the final temperature of the mixture may be………………………

a) 80°C **b) 30°C** **c) 50°C** **d) 110°C**

30- The handle of an electric iron is made of……….............

a) Iron **b) thermal insulator** **c) metal** **d) thermal conductor**

31- All the following materials are considered thermal conductors, except.....

a) copper **b) iron** **c) wood** **d) aluminum.**

32- ....and…........... rods slow down the heat transfer through them.

a) Iron - wood **b) Plastic – wood**

c) Iron – aluminum **d) Plastic – aluminum**

33- ....is the best material to make handles of cooking pots, as it doesn't warm fast.

a) Iron **b) Plastic** **c) Wood** **d) Copper**

34- Heat is transferred by convection through…………..........

a) solids only
b) solids and gases
c) space only
d) liquids and gases

35- Heat is transferred by radiation through………………..........

a) solids only
b) solids and liquids
c) liquids only
d) gases and space.

36- Meteorologists are scientists who study………………..........

a) weather
b) rocks
c) water
d) cells

37- When you put a plastic cup of water in a freezer, the water freezes and its mass……………..

a) decreases
b) increases
c) decreases to half
d) doesn't change.

38- When an object stops on the top of a ramp it stored……..............energy.

a) kinetic
b) light
c) potential
d) sound.

39- Due to the friction force between a moving object and a flat road, the speed of a moving object……………………….

a) decreases
b) increases
c) increases to double
d) doesn't change.

40- If the mass of an object moves down on a ramp..........., its speed will........

a) decreases – increases
b) increases – decreases
c) increases – increases
d) not changes – decreases

41- To make clothes we can use……………..........

a) steel
b) concrete
c) hard fabric
d) flexible fabric.

42- To make bridges we can use……………..........

a) flexible fabric
b) concrete
c) smart clothes
d) glass.

43- All the following are properties of petroleum, except…………..........

a) it is a liquid material
b) it often resists burning
c) it burns easily
d) it is an original material of plastic.

44- All the following materials are liquid materials, except………........

a) petroleum
b) glass before cooling
c) plastic
d) concrete before drying.

45- Limestone is considered from the components of…….............

a) plastic
b) shrink-wrap
c) smart cloth
d) glass.

Complete the following sentences:

1- Matter consists of small building units called ………………….., which consist of smaller units called …………………...

2- Water has …………………..volume and …………………..shape.

3- Milk is a matter in ……....state, while helium is a matter in ………..state.

4- The state of matter that has fixed volume and shape is ………………state.

5- Molecules of liquid matter can move faster than molecules of …………. matter and slower than molecules of ………………….. matter.

6- On boiling water inside a kettle, water particles will move ………………

7- As the speed of particles decreases, its thermal energy …………………...

8- Particles of frozen chocolate have …………………..thermal energy than particles of molten chocolate.

9- Molecules of ………………….. matter have the most kinetic energy because they move very quickly.

10- Particles of steam have ………..thermal energy than particles of water.

11- ………………….. matter changes into liquid state by heating.

12- Matter can change from ………………state into liquid state by cooling.

13- Matter can be changed from one state to another by losing or gaining the ………………….. energy.

14- During melting and ………………….. processes, the force that holds molecules together decreases.

15- Cooling causes particles to move ………………….., while heating causes particles to move …………………...

16- The ………………….. point and ………………….. point of a substance are considered as physical properties of this substance.

17- The temperature at which molecules of water are heated and spread so far apart and becomes a gas is called ………………….. point.

18- Ice has a melting point of ………………… °C., while water has a boiling point of …………………..°C.

19- When the molecules of a substance gain ………………energy, their total kinetic energy ………………, and the temperature of substance ………...

20- By ………………….. the thermal energy of molecules of matter, the force that holds these molecules decreases.

21- Matter can change from liquid state to ………………….. state at low temperatures, while it can change into ……… state at high temperatures.

22- When the force that holds the molecules ……………, they vibrate faster.

23- Evaporation and ………………….. are two opposite processes.

24- Hot water molecules have ……………… kinetic energy than cold water.

25- When we cool a matter, the spaces between its molecules ………………, and when we heat it, the spaces between its molecules …………………...

26- Thermal expansion and ………………….. of a substance depend on heating and cooling of this substance.

27- Engineers use ………………….. joints to keep bridges safe.

28- When a substance is contracted, its volume ………………….., while its volume increases when it is …………………...

29- When bridges are exposed to …………………..weather, the spaces between the molecules of expansion joints increase causing its …………...

30- Different materials ……………… by heating and ……………by cooling.

31- Engineers leave ………………….. between railroad tracks.

32- The molecules of the hotter object move ………………….. than that of the cooler object.

33- Heat transfers between two objects that have different …………………..

34- If you stand on hot sand in barefoot, you will feel the hotness of the sand, because heat transfers from …………………..to …………………...

35- Heat transfers from objects with ………………….. temperature to objects with ………………….. temperature.

36- Molecules of cooler substance move ………………….. after mixing it with hotter substance.

37- If you hold a cup of cold water, heat transfers from the ………………to the …………………...

38- The final temperature of two mixed substances with different temperatures is ………………….. than that of the hotter substance and ………………….. than that of the cooler substance.

39- When mixing two substances with different temperatures, they reach the same temperature at …………………...

40- There are two types of materials according to their ability to transfer thermal energy which are ………………….. and …………………...

41- The handle of an electric iron may be made of ………………….., while ………………… is used to make lower part that is used in ironing clothes.

42- The handle of cooking pot must be made of thermal ………………….. materials, while the body of cooking pot must be made of thermal ………………….. materials.

43- Heat can transfer by three different methods, which are ………………, …………………..and …………………...

44- Heat transfers from a hot slide in a sunny day to your hand by ………………….. when you touch it.

45- Thermal energy transfers from the Sun to us through the space by ………………….. only.

46- Heat is transferred between molecules of boiling water by …………………...

47- When you heat water in a pot, molecules of ………………….. water move up and that of ………………….. water move down.

48- The ………..of a substance doesn't change when this substance changes from one state into another; this is the law of conservation of ……………

49- Energy can be stored in the form of ……………energy inside an object.

50- When a car goes down on a ramp its ………………….. energy changes to ………………….. energy.

51- Friction causes decreasing the ……………… energy of a moving object.

52- Shrink-wrap is created when, we add heat to …………………...

53- Concrete is in ………………….. state when it is formed, while after it dries, it becomes in ………………….. state.

54- Petroleum is a ………… material, while plastic is ……………material.

55- ………………….. change of some compounds of petroleum is used in making plastic.

Write the scientific term:

1) It is the smallest building unit of matter. (……………..)
2) It is a group of atoms bound together. (……………..)
3) It is the state that has fixed volume but doesn't have fixed shape. (……………..)
4) The state of matter at which its particles have the most thermal energy and move very fast. (……………..)
5) It is the state of matter that has a fixed shape and spaces between its molecules are very narrow. (……………..)
6) The state of matter that has moderate thermal energy. (……………..)
7) The total sum of kinetic energy of molecules and atoms of a substance. (……………..)
8) The state of molten glass after its cooling. (……………..)
9) It is a measure of the average kinetic energy of molecules and atoms of a substance. (……………..)
10) The temperature at which solid changes to liquid. (……………..)
11) The temperature at which liquid changes into gas. (……………..)
12) A process in which liquid molecules move faster and change to another state. (……………..)
13) A form of energy that gained or lost by the matter to change its state. (……………..)
14) They are materials that allow thermal energy to transfer through. (……………..)
15) The way by which the heat is transferred through solids only. (……………..)
16) It is the transfer of heat due to the movement of a liquid or gas. (……………..)
17) The way by which the heat is transferred through gases and space. (……………..)
18) The energy that the object gains when it moves down on a ramp. (……………..)
19) A material that is used in making shrink-wrap. (……………..)
20) A type of clothes keeps themselves clean. (……………..)

Put (√) or (x):

1- All forms of matter are made of particles that are in a state of motion. ( )
2- Gases have variable shape and volume. ( )
3- Molecules of solids have a lot of energy. ( )
4- Almost all matters contain thermal energy. ( )
5- Molecules of solids move faster than molecules of liquids. ( )
6- Molecules of water move slower than molecules of steam. ( )
7- Matter can't be changed from one state to another. ( )
8- When an object gains heat, its temperature increases and its state may change. ( )
9- The movement of particles within an object is used to describe the thermal energy. ( )
10- Molecules of water move slower after changing into water vapor. ( )
11- Glass can be melt at very low temperatures. ( )
12- The boiling point of water is less than that of mercury. ( )
13- When the force that holds the molecules decreases, they vibrate slower. ( )
14- When a substance is cooled, its molecules come close together. ( )
15- Water can be changed into steam by cooling. ( )
16- Kinetic energy is the energy of motion. ( )
17- When the temperature of a matter increases, its molecules move slower. ( )
18- Food coloring spreads out in cold water faster than in hot water. ( )
19- When the temperature of solids increases, their volume decrease. ( )
20- Expansion and contraction of matter occur due to changes in temperature. ( )
21- Expansion and contraction are two opposite processes. ( )
22- When a thermometer is placed in a cup of iced water, the liquid inside the thermometer goes down due to its contraction. ( )
23- If it is hard to open the lid of the jar, we need to pour cold water on the lid of the jar to open it easily. ( )
24- When objects lose heat, they contract. ( )
25- The volume of most liquids increases as they freeze. ( )
26- Engineers use expansion joints to keep bridges from buckling at high temperatures. ( )

27- No spaces are left between railroad tracks. ( )

28- Heat cannot be lost but it is only transferred. ( )

29- When objects with the same temperature touch each other, heat transfer takes place. ( )

30- Heat transfers from the cooler object to the hotter object. ( )

31- Molecules of cold or hot substances always move. ( )

32- The final temperature of two mixed substances with different temperatures is between the temperatures of hotter and cooler substances. ( )

33- The temperature of a hotter substance increases after it is mixed with a cooler substance. ( )

34- Thermal equilibrium means that the objects in contact reach the same temperature. ( )

35- Thermal energy is destroyed when it is transferred from one body to another. ( )

36- In electric iron heat transfers from cloth to iron. ( )

37- Thermal conductors are good conductors of heat. ( )

38- Thermal insulators can prevent the transfer of heat completely through them. ( )

39- Copper and iron allow heat to travel freely through them. ( )

40- Wood is warm faster than plastic. ( )

41- Thermal energy transfer can occur in only two ways. ( )

42- Heat transfers from an electric heater to your body by radiation when you stand near by it. ( )

43- The speed of heat transfer between objects increases when the difference in temperature between objects increases. ( )

44- Matter neither be created nor destroyed, it just changes from one state to another. ( )

45- The temperature increases when we go far away the source of heat. ( )

46- Friction increases the speed of moving objects. ( )

47- A heavier object moves faster than a lighter object when they go down on the same ramp. ( )

48- When a marble goes down on a ramp its potential energy increases. ( )

49- Every material is useful for all purposes. ( )

50- Smart clothes can control the temperature of the human body. ( )

51- Concrete and steel are used in making clothes. ( )

52- Plastic often resists burning. ( )
53- Properties of plastic are differ from properties of petroleum. ( )
54- Steel is made by chemical change of plastic. ( )
55- Concrete is made of water and plastic. ( )
56- Concrete stays in the liquid state after it dries. ( )

Correct the underlined words:

1) Substances in gas form have the least thermal energy. (……………..)
2) Air inside the car tires has fixed shape and volume. (……………..)
3) When wax melts, its particles lose thermal energy and speed up. (……………..)
4) At very high temperatures, water changes into ice. (……………..)
5) The kinetic energy of water molecules is equal to that of water vapor molecules. (……………..)
6) During melting and freezing processes, the force holding molecules together increases, so they vibrate slower. (……………..)
7) Thermal energy transfers from one substance to another if they have same temperatures. (……………..)
8) By increasing the thermal energy, the potential energy increases. (……………..)
9) When the temperature of alcohol inside thermometers increases, its volume increases causing its contraction. (……………..)
10) The main idea to make a thermometer is changing the mass of liquid inside it according to the temperature. (……………..)
11) Without leaving spaces between railroad tracks, car accidents may occur. (……………..)
12) Expansion and contraction are two similar processes. (……………..)
13) When you add some cool water to hot tea the molecules of tea will move faster. (……………..)
14) Thermal insulator materials allow heat to travel freely through them. (……………..)
15) Heat is transferred through copper and iron by convection.(…………..)
16) Heat is transferred through solids and liquids by convection.(………....)
17) The mass of chocolate bar before melting is larger than its mass after melting. (……………..)
18) Due to the friction between a moving object and a flat road the kinetic energy of the moving object changes into sound energy. (……………..)

Choose from column (B) what suits it in column (A):

1)

Column A	Column B
1) Melting	a) It is the change of matter from liquid state to solid state.
2) Evaporation	b) It is the change of matter from gas state to liquid state.
3) Freezing	c) It is the change of matter from liquid state to gas state.
4) Condensation	d) The process of shaping a mass of molten glass by blowing air into it through a hollow tube.
5) Glassblowing	e) It is the change of matter from solid state to liquid state.

1	2	3	4	5
……..	……..	……..	……..	……..

2)

Column A	Column B
1) Expansion	a) Joints between parts of a bridge that allow its expansion without being damaged.
2) Contraction	b) They are materials that slow down the heat transfer through them.
3) Thermal insulators	c) The increase in the volume of a material as its temperature increases.
4) Expansion joints	d) A device used to measure the temperature.
5) Thermometer	e) The decrease is the volume of a material as its temperature decreases.

1	2	3	4	5
……..	……..	……..	……..	……..

3)

Column A	Column B
1) Heat	a) It is a thermal conductor.
2) Plastic	b) It is the measuring unit of heat.
3) Metal	c) It resists the transfer of thermal energy.
4) Calorie	d) It is an essential component of life on Earth.
5) Thermal equilibrium	e) It occurs when heat transfer stops between two objects reach the same temperature.

1	2	3	4	5
……..	……..	……..	……..	……..

4)

Column A	Column B
1) Concrete	a) It is the original material of plastic.
2) Smart clothes	b) It is made of a mixture of iron and other elements.
3) Plastic	c) It consists of sand, limestone and soda ash.
4) Glass	d) It can light up in dark places.
5) Petroleum	e) It is a mixture of rock, sand and water which becomes hard after it dries.
6) Steel	f) It is made by chemical change of some compounds of petroleum.

1	2	3	4	5	6
……..	……..	……..	……..	……..	……..

Give reasons for:

1) **Particles of steam have higher thermal energy than particles of water.**
➢ ……………………………………………………………………………
2) **Particles of water have higher thermal energy than particles of ice.**
➢ ……………………………………………………………………………
3) **Ice melts when it is put in a hot cooking pan.**
➢ ……………………………………………………………………………
4) **Matter may change from one state to another.**
➢ ……………………………………………………………………………
5) **Food coloring takes less time to spread out in the hot water than in cold water.**
➢ ……………………………………………………………………………
……………………………………………………………………………
6) **The level of alcohol inside a thermometer rises up if we put it inside hot water and goes down if we put it inside cold water.**
➢ ……………………………………………………………………………
7) **Matter expands when its thermal energy increases.**
➢ ……………………………………………………………………………
……………………………………………………………………………
8) **The size of a balloon decreases if it is subjected to cold weather.**
➢ ……………………………………………………………………………
9) **Engineers use expansion joints in the designing of bridges.**
➢ ……………………………………………………………………………
10) **Small spaces are left between the railroad tracks.**
➢ ……………………………………………………………………………
……………………………………………………………………………
11) **Aluminum and copper are good conductors of heat.**
➢ ……………………………………………………………………………
12) **Glass and wood are bad conductors of heat.**
➢ ……………………………………………………………………………

13) **The handle of an electric iron is made of plastic.**

➢ ……………………………………………………………………………

14) **The lower part of an electric iron is made of iron.**

➢ ……………………………………………………………………………

15) **Plastic is better than wood to make the handle of cooking pots.**

➢ ……………………………………………………………………………

16) **Sometimes the final temperature of a mixture of two substances with different temperatures is less than their average temperature.**

➢ ……………………………………………………………………………

17) **Heat transfer stops after a while between two mixed substances with different temperatures.**

➢ ……………………………………………………………………………

18) **After mixing two substances with different temperatures, the molecules of the hotter substance move slower.**

➢ ……………………………………………………………………………

……………………………………………………………………………

19) **The vibration of molecules of a matter increases when it becomes warmer.**

➢ ……………………………………………………………………………

20) **You feel the heat of the Sun although there is a space between the Sun and Earth.**

➢ ……………………………………………………………………………

21) **Decreasing of mass of popcorn grains which have some moisture after cooking them.**

➢ ……………………………………………………………………………

22) **The tires of a moving car become hot.**

➢ ……………………………………………………………………………

23) **A truck is faster than a small car, when both of them move down on the same ramp.**

➢ ……………………………………………………………………………

……………………………………………………………………………

What happens if (to)……………….:

1) To the volume of a liquid if we transfer it from a container to another.
➢ ……………………………………………………………………………….

2) To the state of glass when it is heated at very high temperatures.
(The state of chocolate when it is put in hot oven.)
➢ ……………………………………………………………………………….

3) To the speed of particles of milk if we put it in a freezer.
➢ ……………………………………………………………………………….

4) To the level of alcohol inside a thermometer if we put it inside hot water.
➢ ……………………………………………………………………………….

5) To the level of alcohol inside a thermometer if we put it inside cold water
➢ ……………………………………………………………………………….

6) To the spaces between molecules of matter if we heat it.
➢ ……………………………………………………………………………….

7) To the size of an inflated balloon if it is put in hot weather.
➢ ……………………………………………………………………………….

8) To the volume of matter when it is cooled.
➢ ……………………………………………………………………………….

9) To bridges if engineers don't use expansion joints in their designing.
➢ ……………………………………………………………………………….

10) If no spaces are left between the railroad tracks.
➢ ……………………………………………………………………………….

11) If you hold a piece of frozen chocolate. (According to transfer of heat)
➢ ……………………………………………………………………………….

12) If you touch a hot cup of tea. (According to transfer of heat)
➢ ……………………………………………………………………………….

13) To the molecules movement of a hotter substance after mixing it with a cooler substance.
➢ ……………………………………………………………………………….
……………………………………………………………………………….

14) To the heat transfer, when thermal equilibrium takes place.

➢ ………………………………………………………………………………

15) To the kinetic energy of molecules of a matter when it becomes warmer.

➢ ………………………………………………………………………………

16) To the temperature of a piece of metal when you hit it several times with a hammer.

➢ ………………………………………………………………………………

17) If you touch a hot metal spoon placed in a hot cup of tea.

➢ ………………………………………………………………………………

18) To the mass of a piece of butter after melting it.

➢ ………………………………………………………………………………

19) To the stored energy of a stopped object when it moves down on a slid.

➢ ………………………………………………………………………………

20) To the speed of a moving object when it is affected by friction.

➢ ………………………………………………………………………………

21) If you are wearing smart clothes in a dark place.

➢ ………………………………………………………………………………

22) If making chemical change to some compounds of petroleum.

➢ ………………………………………………………………………………

23) If concrete is left to dry.

➢ ………………………………………………………………………………

Answer the following questions:

1) Arrange the three states of water (ice - water - steam) in a descending order according to:

a) The speed of their molecules: ………….. → ………….. → …………...

b) The force holding molecules together: ……….. → ……... → ………….

c) Their thermal energy: ………….. → ………….. → …………...

2) Choose the odd word out, then write the scientific term of the others :

1- Oil – Water – Alcohol – Water vapor.

- **The odd word is: ……………………………………………………**
- **The scientific term is: ………………………………………………….**

2- Iron – Copper – Ice – Water.

- **The odd word is: ……………………………………………………**
- **The scientific term is: ………………………………………………….**

3- Iron – Air – Wood – gold.

- **The odd word is: ……………………………………………………**
- **The scientific term is: ………………………………………………**

4- Plastic – Copper – Iron – Aluminum.

- **The odd word is: ……………………………………………………**
- **The scientific term is: ………………………………………………**

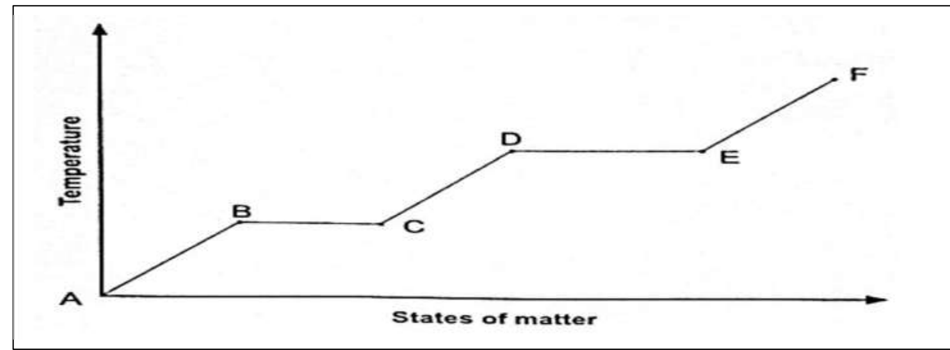
5- Air – Copper – Wood – Glass.

- **The odd word is: ……………………………………………………**
- **The scientific term is: ………………………………………………**

6- Conduction – Convection – Friction – Radiation.

- **The odd word is: ……………………………………………………**
- **The scientific term is: ………………………………………………**

3) Look at the following figure, then complete the following sentences:



a) The area (A— B) represent the ………….. state of matter.

b) Between points (D – E) the substance starts to change from ………….. state into ………….. state.

c) The point (B) represents the ……………….. point of matter, while the point (D) represents the ……………….. point of matter.

4) **Look at the following figure, then complete the following sentences using the words below:**



(heat — cool — expansion — contraction — kinetic)

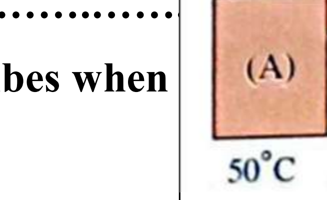
a) **When we …………….. the ball, the …………….. energy of its molecules increases.**

b) **After heating the ball, the ball cannot pass as a result of its ……………..**

c) **If we …………….. the ball, it can pass through the ring again as a result of its ……………...**

****

5) **Look at the following figure, then complete the following sentences:**



a) **In the opposite figure, heat transfers between the two metal cubes from cube …… to cube … by ……………**

b) **Heat transfer stops between the two metal cubes when they reach the …………….. temperature.**

c) **The final temperature of the two metal cubes at thermal equilibrium equal …………°C.**

G6 Final Revision on unit 2 (answered)

Choose the correct answer:

1- Particles of all the following substances have a lot of energy, except...........
a) oxygen b) carbon dioxide c) water vapor d) glass

2- Thermal energy affects..................and...................... of a matter.
a) temperature – state b) temperature – color
c) color – taste d) color – smell

3- The..................energy is related to the motion of particles of a matter.
a) chemical b) potential c) light d) thermal

4- The transfer of...........................energy is called heat.
a) chemical b) potential c) kinetic d) thermal

5- The state of matter in which its particles has the highest thermal energy is……………………….state.
a) solid b) liquid c) ice d) gas

6- Melting process is the reverse process of…………………
a) boiling b) freezing c) evaporation d) condensation

7- During ………………..processes, the molecules absorb thermal energy and move faster.
a) melting and freezing b) freezing and condensation
c) melting and evaporation d) melting and condensation

8- The temperature……….............during the melting of solids.
a) decreases b) increases c) doesn't change d) may increase or decrease

9- Water molecules have the lowest kinetic energy when it is in the form of……………………
a) ice b) water drops c) water vapor d) steam

10- Objects with more thermal energy have.....................kinetic energy.
a) more b) less c) the same d) no

11- The process in which liquid molecules move slower and change to another state is…………
a) melting b) freezing c) evaporation d) condensation

12- By decreasing the temperature of a substance, its molecules move………. each other and the spaces between them................

a) farther away — increase. b) nearer to — increase.

c) farther away — decrease. d) nearer to — decrease.

13- As a result of heat flow through metals, they……………...........

a) expand b) contract c) get smaller d) are not affected

14- Raising the temperature of materials can cause…..............

a) freezing and expansion b) condensation and contraction

c) melting and expansion d) melting and contraction

15- When the thermometer that contains a colored alcohol is placed in hot water, the alcohol…………..........

a) contracts b) evaporates c) changes its color d) expands

16- When the temperature of a rod of iron is increased, its length……...........

a) increases b) decreases to its half

c) doesn't change d) decreases to its quarter

17- A metallic rod of 50 meter length was heated at high temperature, its length could reach……………...........meter after heating.

a) 47 b) 48 c) 49 d) 51

18- Expansion and contraction of liquids explain how a………….works.

a) thermometer b) balance c) scale d) galvanometer

19- When the kinetic energy of liquids decreases, they may……..............

a) expand b) contract c) evaporate d) disappear

20- ....happens as a result of the separation of the particles of a substance when heat is transferred to it.

a) Contraction b) Expansion c) Growth d) Freezing point

21- Expansion joints are designed to allow concrete…….................when temperature……..............to keep bridges safe from buckling.

a) expands - decreases b) expands - increases

c) contract - increase d) contract - doesn't change

22- A tightly closed metal lid of a glass bottle can be opened more easily if it is put in...................for some time.

a) cold water b) iced water c) vinegar d) hot water

23- Metallic parts of a bridge……...........in different temperatures.

a) expand only b) expand and contract

c) contract only d) never expand or contract

24- Railroad tracks are made up of……….............

a) glass b) coal c) plastic d) iron.

25- Which of the following may not be a source of thermal energy?

a) Small oven b) The Sun c) Moon d) The heater

26- If heat transfers to a lower temperature object, its molecules will............

a) stop moving b) move slower

c) move faster d) not be affected.

27- If you hold an ice cube in your hand, the molecules of ice will………..

a) stop moving b) move slower

c) move faster d) not be affected.

28- The average temperature is almost…….................the final temperature of the mixture of two substances with different temperatures.

a) more than b) less than c) equal to d) double

29- If you pour a cup of water with temperature 30°C to another cup of water with temperature 80°C, the final temperature of the mixture may be……………………….

a) 80°C b) 30°C c) 50°C d) 110°C

30- The handle of an electric iron is made of……….............

a) Iron b) thermal insulator c) metal d) thermal conductor

31- All the following materials are considered thermal conductors, except.....

a) copper b) iron c) wood d) aluminum.

32- ....and…........... rods slow down the heat transfer through them.

a) Iron - wood b) Plastic – wood

c) Iron – aluminum d) Plastic – aluminum

33- ....is the best material to make handles of cooking pots, as it doesn't warm fast.

a) Iron b) Plastic c) Wood d) Copper

34- Heat is transferred by convection through…………...........

a) solids only b) solids and gases

c) space only d) liquids and gases

35- Heat is transferred by radiation through……………….........

a) solids only b) solids and liquids

c) liquids only d) gases and space.

36- Meteorologists are scientists who study………………..........

a) weather b) rocks c) water d) cells

37- When you put a plastic cup of water in a freezer, the water freezes and its mass……………..

a) decreases b) increases c) decreases to half d) doesn't change.

38- When an object stops on the top of a ramp it stored……...............energy.

a) kinetic b) light c) potential d) sound.

39- Due to the friction force between a moving object and a flat road, the speed of a moving object……………………….

a) decreases b) increases c) increases to double d) doesn't change.

40- If the mass of an object moves down on a ramp..........., its speed will........

a) decreases – increases b) increases – decreases

c) increases – increases d) not changes – decreases

41- To make clothes we can use……………..........

a) steel b) concrete c) hard fabric d) flexible fabric.

42- To make bridges we can use……………..........

a) flexible fabric b) concrete c) smart clothes d) glass.

43- All the following are properties of petroleum, except…………...........

a) it is a liquid material b) it often resists burning

c) it burns easily d) it is an original material of plastic.

44- All the following materials are liquid materials, except………..........

a) petroleum b) glass before cooling

c) plastic d) concrete before drying.

45- Limestone is considered from the components of…….............

a) plastic b) shrink-wrap c) smart cloth d) glass.

Complete the following sentences:

1- Matter consists of small building units called molecules, which consist of smaller units called atoms.
2- Water has fixed volume and variable shape.
3- Milk is a matter in liquid state, while helium is a matter in gas state.
4- The state of matter that has fixed volume and shape is solid state.
5- Molecules of liquid matter can move faster than molecules of solid matter and slower than molecules of gas matter.
6- On boiling water inside a kettle, water particles will move faster.
7- As the speed of particles decreases, its thermal energy decreases.
8- Particles of frozen chocolate have less thermal energy than particles of molten chocolate.
9- Molecules of gas matter have the most kinetic energy because they move very quickly.
10- Particles of steam have higher thermal energy than particles of water.
11- Solid matter changes into liquid state by heating.
12- Matter can change from gas state into liquid state by cooling.
13- Matter can be changed from one state to another by losing or gaining the thermal energy.
14- During melting and evaporation processes, the force that holds molecules together decreases.
15- Cooling causes particles to move slower, while heating causes particles to move faster.
16- The melting point and boiling point of a substance are considered as physical properties of this substance.
17- The temperature at which molecules of water are heated and spread so far apart and becomes a gas is called boiling point.
18- Ice has a melting point of 0 °C., while water has a boiling point of 100 °C.
19- When the molecules of a substance gain thermal energy, their total kinetic energy increase, and the temperature of substance increases.

20- By increasing the thermal energy of molecules of matter, the force that holds these molecules decreases.

21- Matter can change from liquid state to solid state at low temperatures, while it can change into gas state at high temperatures.

22- When the force that holds the molecules decreases, they vibrate faster.

23- Evaporation and condensation are two opposite processes.

24- Hot water molecules have more kinetic energy than cold water.

25- When we cool a matter, the spaces between its molecules decrease, and when we heat it, the spaces between its molecules increase.

26- Thermal expansion and contraction of a substance depend on heating and cooling of this substance.

27- Engineers use expansion joints to keep bridges safe.

28- When a substance is contracted, its volume decreases, while its volume increases when it is expands.

29- When bridges are exposed to hot weather, the spaces between the molecules of expansion joints increase causing its expansion.

30- Different materials expand by heating and contract by cooling.

31- Engineers leave small spaces between railroad tracks.

32- The molecules of the hotter object move faster than that of the cooler object.

33- Heat transfers between two objects that have different temperature.

34- If you stand on hot sand in barefoot, you will feel the hotness of the sand, because heat transfers from sand to your legs.

35- Heat transfers from objects with high temperature to objects with low temperature.

36- Molecules of cooler substance move faster after mixing it with hotter substance.

37- If you hold a cup of cold water, heat transfers from the hand to the cup.

38- The final temperature of two mixed substances with different temperatures is less than that of the hotter substance and greater than that of the cooler substance.

39- When mixing two substances with different temperatures, they reach the same temperature at thermal equilibrium.

40- There are two types of materials according to their ability to transfer thermal energy which are thermal conductors and thermal insulators.

41- The handle of an electric iron may be made of plastic, while iron is used to make lower part that is used in ironing clothes.

42- The handle of cooking pot must be made of thermal insulator materials, while the body of cooking pot must be made of thermal conductor materials.

43- Heat can transfer by three different methods, which are conduction, convection and radiation.

44- Heat transfers from a hot slide in a sunny day to your hand by conduction when you touch it.

45- Thermal energy transfers from the Sun to us through the space by radiation only.

46- Heat is transferred between molecules of boiling water by convection.

47- When you heat water in a pot, molecules of hotter water move up and that of cooler water move down.

48- The mass of a substance doesn't change when this substance changes from one state into another; this is the law of conservation of mass.

49- Energy can be stored in the form of potential energy inside an object.

50- When a car goes down on a ramp its potential energy changes to kinetic energy.

51- Friction causes decreasing the kinetic energy of a moving object.

52- Shrink-wrap is created when, we add heat to plastic.

53- Concrete is in liquid state when it is formed, while after it dries, it becomes in solid state.

54- Petroleum is a liquid material, while plastic is solid material.

55- Chemical change of some compounds of petroleum is used in making plastic.

Write the scientific term:

1) It is the smallest building unit of matter. (Atom)
2) It is a group of atoms bound together. (Molecule)
3) It is the state that has fixed volume but doesn't have fixed shape. (Liquid state)
4) The state of matter at which its particles have the most thermal energy and move very fast. (Gas state)
5) It is the state of matter that has a fixed shape and spaces between its molecules are very narrow. (Solid state)
6) The state of matter that has moderate thermal energy. (Liquid state)
7) The total sum of kinetic energy of molecules and atoms of a substance. (Thermal energy)
8) The state of molten glass after its cooling. (Solid state)
9) It is a measure of the average kinetic energy of molecules and atoms of a substance. (Temperature)
10) The temperature at which solid changes to liquid. (Melting point)
11) The temperature at which liquid changes into gas. (Boiling point)
12) A process in which liquid molecules move faster and change to another state. (Evaporation)
13) A form of energy that gained or lost by the matter to change its state. (Thermal energy)
14) They are materials that allow thermal energy to transfer through. (Thermal conductors)
15) The way by which the heat is transferred through solids only. (Conduction)
16) It is the transfer of heat due to the movement of a liquid or gas. (Convection)
17) The way by which the heat is transferred through gases and space. (Radiation)
18) The energy that the object gains when it moves down on a ramp. (Kinetic energy)
19) A material that is used in making shrink-wrap. (Plastic)
20) A type of clothes keeps themselves clean. (Smart clothes)

Put (√) or (x):

1- All forms of matter are made of particles that are in a state of motion. (√)
2- Gases have variable shape and volume. (√)
3- Molecules of solids have a lot of energy. (x)
4- Almost all matters contain thermal energy. (√)
5- Molecules of solids move faster than molecules of liquids. (x)
6- Molecules of water move slower than molecules of steam. (√)
7- Matter can't be changed from one state to another. (x)
8- When an object gains heat, its temperature increases and its state may change. (√)
9- The movement of particles within an object is used to describe the thermal energy. (√)
10- Molecules of water move slower after changing into water vapor. (x)
11- Glass can be melt at very low temperatures. (x)
12- The boiling point of water is less than that of mercury. (√)
13- When the force that holds the molecules decreases, they vibrate slower. (x)
14- When a substance is cooled, its molecules come close together. (√)
15- Water can be changed into steam by cooling. (x)
16- Kinetic energy is the energy of motion. (√)
17- When the temperature of a matter increases, its molecules move slower. (x)
18- Food coloring spreads out in cold water faster than in hot water. (x)
19- When the temperature of solids increases, their volume decrease. (x)
20- Expansion and contraction of matter occur due to changes in temperature. (√)
21- Expansion and contraction are two opposite processes. (√)
22- When a thermometer is placed in a cup of iced water, the liquid inside the thermometer goes down due to its contraction. (√)
23- If it is hard to open the lid of the jar, we need to pour cold water on the lid of the jar to open it easily. (x)
24- When objects lose heat, they contract. (√)
25- The volume of most liquids increases as they freeze. (x)
26- Engineers use expansion joints to keep bridges from buckling at high temperatures. (√)

27- No spaces are left between railroad tracks. (x)
28- Heat cannot be lost but it is only transferred. (√)
29- When objects with the same temperature touch each other, heat transfer takes place. (x)
30- Heat transfers from the cooler object to the hotter object. (x)
31- Molecules of cold or hot substances always move. (√)
32- The final temperature of two mixed substances with different temperatures is between the temperatures of hotter and cooler substances. (√)
33- The temperature of a hotter substance increases after it is mixed with a cooler substance. (x)
34- Thermal equilibrium means that the objects in contact reach the same temperature. (√)
35- Thermal energy is destroyed when it is transferred from one body to another. (x)
36- In electric iron heat transfers from cloth to iron. (x)
37- Thermal conductors are good conductors of heat. (√)
38- Thermal insulators can prevent the transfer of heat completely through them. (x)
39- Copper and iron allow heat to travel freely through them. (√)
40- Wood is warm faster than plastic. (√)
41- Thermal energy transfer can occur in only two ways. (x)
42- Heat transfers from an electric heater to your body by radiation when you stand near by it. (√)
43- The speed of heat transfer between objects increases when the difference in temperature between objects increases. (√)
44- Matter neither be created nor destroyed, it just changes from one state to another. (√)
45- The temperature increases when we go far away the source of heat. (x)
46- Friction increases the speed of moving objects. (x)
47- A heavier object moves faster than a lighter object when they go down on the same ramp. (√)
48- When a marble goes down on a ramp its potential energy increases. (x)
49- Every material is useful for all purposes. (x)
50- Smart clothes can control the temperature of the human body. (√)
51- Concrete and steel are used in making clothes. (x)

52- Plastic often resists burning. (√)
53- Properties of plastic are differ from properties of petroleum. (√)
54- Steel is made by chemical change of plastic. (x)
55- Concrete is made of water and plastic. (x)
56- Concrete stays in the liquid state after it dries. (x)

Correct the underlined words:

1) Substances in gas form have the least thermal energy. (solid)
2) Air inside the car tires has fixed shape and volume. (variable)
3) When wax melts, its particles lose thermal energy and speed up. (gain)
4) At very high temperatures, water changes into ice. (water vapor)
5) The kinetic energy of water molecules is equal to that of water vapor molecules. (less than)
6) During melting and freezing processes, the force holding molecules together increases, so they vibrate slower. (Condensation)
7) Thermal energy transfers from one substance to another if they have same temperatures. (different)
8) By increasing the thermal energy, the potential energy increases. (kinetic)
9) When the temperature of alcohol inside thermometers increases, its volume increases causing its contraction. (expansion)
10) The main idea to make a thermometer is changing the mass of liquid inside it according to the temperature. (volume)
11) Without leaving spaces between railroad tracks, car accidents may occur. (train)
12) Expansion and contraction are two similar processes. (opposite)
13) When you add some cool water to hot tea the molecules of tea will move faster. (slower)
14) Thermal insulator materials allow heat to travel freely through them. (conductor)
15) Heat is transferred through copper and iron by convection. (conduction)
16) Heat is transferred through solids and liquids by convection. (gases)
17) The mass of chocolate bar before melting is larger than its mass after melting. (equal to)
18) Due to the friction between a moving object and a flat road the kinetic energy of the moving object changes into sound energy. (thermal)

Choose from column (B) what suits it in column (A):

1)

Column A	Column B
1) Melting	a) It is the change of matter from liquid state to solid state.
2) Evaporation	b) It is the change of matter from gas state to liquid state.
3) Freezing	c) It is the change of matter from liquid state to gas state.
4) Condensation	d) The process of shaping a mass of molten glass by blowing air into it through a hollow tube.
5) Glassblowing	e) It is the change of matter from solid state to liquid state.

1	2	3	4	5
e	c	a	b	d

2)

Column A	Column B
1) Expansion	a) Joints between parts of a bridge that allow its expansion without being damaged.
2) Contraction	b) They are materials that slow down the heat transfer through them.
3) Thermal insulators	c) The increase in the volume of a material as its temperature increases.
4) Expansion joints	d) A device used to measure the temperature.
5) Thermometer	e) The decrease is the volume of a material as its temperature decreases.

1	2	3	4	5
c	e	b	a	d

3)

Column A	Column B
1) Heat	a) It is a thermal conductor.
2) Plastic	b) It is the measuring unit of heat.
3) Metal	c) It resists the transfer of thermal energy.
4) Calorie	d) It is an essential component of life on Earth.
5) Thermal equilibrium	e) It occurs when heat transfer stops between two objects reach the same temperature.

1	2	3	4	5
d	c	a	b	e

4)

Column A	Column B
1) Concrete	a) It is the original material of plastic.
2) Smart clothes	b) It is made of a mixture of iron and other elements.
3) Plastic	c) It consists of sand, limestone and soda ash.
4) Glass	d) It can light up in dark places.
5) Petroleum	e) It is a mixture of rock, sand and water which becomes hard after it dries.
6) Steel	f) It is made by chemical change of some compounds of petroleum.

1	2	3	4	5	6
e	d	f	c	a	b

Give reasons for:

1) **Particles of steam have higher thermal energy than particles of water.**
   - ➢ **Because particles of steam move faster than particles of water.**
2) **Particles of water have higher thermal energy than particles of ice.**
   - ➢ **Because particles of water move faster than particles of ice.**
3) **Ice melts when it is put in a hot cooking pan.**
   - ➢ **Because heat flows from the pan (hotter) to the ice (colder).**
4) **Matter may change from one state to another.**
   - ➢ **Due to change in the thermal energy and temperature of a matter.**
5) **Food coloring takes less time to spread out in the hot water than in cold water.**
   - ➢ **Because molecules of hot water have more thermal energy, so they have more kinetic energy and move faster.**
6) **The level of alcohol inside a thermometer rises up if we put it inside hot water and goes down if we put it inside cold water.**
   - ➢ **Because alcohol expands by heating and contracts by cooling.**
7) **Matter expands when its thermal energy increases.**
   - ➢ **Because the kinetic energy of its molecules increases, so the spaces between them increase.**
8) **The size of a balloon decreases if it is subjected to cold weather.**
   - ➢ **Because the air inside the balloon contracts by cooling.**
9) **Engineers use expansion joints in the designing of bridges.**
   - ➢ **To allow bridges expand safely at high temperature without buckling.**
10) **Small spaces are left between the railroad tracks.**
    - ➢ **To allow these tracks expand in hot weather without being bent to avoid train accidents.**
11) **Aluminum and copper are good conductors of heat.**
    - ➢ **Because they allow heat to travel freely through them.**
12) **Glass and wood are bad conductors of heat.**
    - ➢ **Because they slow down (resist) the transfer of heat through them.**

13) **The handle of an electric iron is made of plastic.**
- ➢ **Because plastic is a thermal insulator.**

14) **The lower part of an electric iron is made of iron.**
- ➢ **Because iron is a thermal conductor.**

15) **Plastic is better than wood to make the handle of cooking pots.**
- ➢ **Because plastic warms slower than wood.**

16) **Sometimes the final temperature of a mixture of two substances with different temperatures is less than their average temperature.**
- ➢ **Because some of thermal energy transfers to the air or to the container.**

17) **Heat transfer stops after a while between two mixed substances with different temperatures.**
- ➢ **Because the two substances reach to the same temperature at thermal equilibrium.**

18) **After mixing two substances with different temperatures, the molecules of the hotter substance move slower.**
- ➢ **Because after mixing, the kinetic energy and temperature of the molecules of the hotter substance decrease.**

19) **The vibration of molecules of a matter increases when it becomes warmer.**
- ➢ **Because the kinetic energy of its molecules increases.**

20) **You feel the heat of the Sun although there is a space between the Sun and Earth.**
- ➢ **Because the heat transfers through the space by radiation.**

21) **Decreasing of mass of popcorn grains which have some moisture after cooking them.**
- ➢ **Due to the evaporation of the water during cooking popcorn.**

22) **The tires of a moving car become hot.**
- ➢ **Because friction force changes kinetic energy into thermal energy.**

23) **A truck is faster than a small car, when both of them move down on the same ramp.**
- ➢ **Because the truck has mass more than the small car, so has more kinetic energy.**

What happens if (to)……………….:

1) To the volume of a liquid if we transfer it from a container to another.
   - The volume doesn't change.
2) To the state of glass when it is heated at very high temperatures.
   (The state of chocolate when it is put in hot oven.)
   - It changes from solid state into liquid state.
3) To the speed of particles of milk if we put it in a freezer.
   - The speed will decrease.
4) To the level of alcohol inside a thermometer if we put it inside hot water.
   - It will rise up due to its expansion.
5) To the level of alcohol inside a thermometer if we put it inside cold water
   - It will go down due to its contraction.
6) To the spaces between molecules of matter if we heat it.
   - It will increase.
7) To the size of an inflated balloon if it is put in hot weather.
   - Its size will increase.
8) To the volume of matter when it is cooled.
   - Its volume will decrease.
9) To bridges if engineers don't use expansion joints in their designing.
   - Buckling of bridges when they expand at hot weather.
10) If no spaces are left between the railroad tracks.
    - Train accidents occur due to bending of tracks in hot weather.
11) If you hold a piece of frozen chocolate. (According to transfer of heat)
    - Heat transfers from the hand to the chocolate.
12) If you touch a hot cup of tea. (According to transfer of heat)
    - Heat transfers from the cup to the hand.
13) To the molecules movement of a hotter substance after mixing it with a cooler substance.
    - The movement of molecules of the hotter substance becomes slower after mixing.

14) To the heat transfer, when thermal equilibrium takes place.
- The heat transfer will stop.

15) To the kinetic energy of molecules of a matter when it becomes warmer.
- The kinetic energy will increase

16) To the temperature of a piece of metal when you hit it several times with a hammer.
- The temperature of a piece of metal will increase.

17) If you touch a hot metal spoon placed in a hot cup of tea.
- Heat transfers from the spoon to the hand by conduction.

18) To the mass of a piece of butter after melting it.
- The mass doesn't change.

19) To the stored energy of a stopped object when it moves down on a slid.
- The stored potential energy changes into kinetic energy.

20) To the speed of a moving object when it is affected by friction.
- The speed will decrease.

21) If you are wearing smart clothes in a dark place.
- They will light up.

22) If making chemical change to some compounds of petroleum.
- Plastic will form.

23) If concrete is left to dry.
- It becomes hard (solid).

Answer the following questions:

1) Arrange the three states of water (ice - water - steam) in a descending order according to:

   a) The speed of their molecules: steam → water → ice.

   b) The force holding molecules together: ice → water → steam.

   c) Their thermal energy: steam → water → ice.

2) Choose the odd word out, then write the scientific term of the others :

1- Oil – Water – Alcohol – Water vapor.

- The odd word is: Water vapor.
- The scientific term is: liquid matters.

2- Iron – Copper – Ice – Water.

- The odd word is: Water.
- The scientific term is: solid matters.

3- Iron – Air – Wood – gold.

- The odd word is: Air.
- The scientific term is: solid matters.

4- Plastic – Copper – Iron – Aluminum.

- The odd word is: Plastic.
- The scientific term is: thermal and electric conductors.

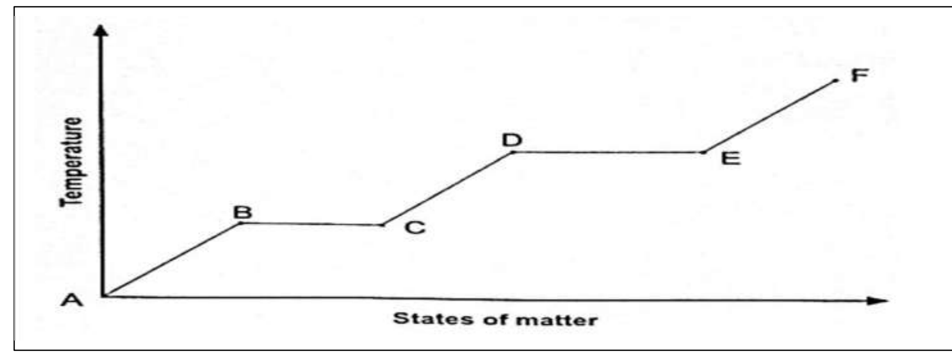
5- Air – Copper – Wood – Glass.

- The odd word is: Copper.
- The scientific term is: thermal and electric insulators.

6- Conduction – Convection – Friction – Radiation.

- The odd word is: Friction.
- The scientific term is: Ways of heat transfer.

3) Look at the following figure, then complete the following sentences:



a) The area (A— B) represent the solid state of matter.

b) Between points (D – E) the substance starts to change from liquid state into gas state.

c) The point (B) represents the melting point of matter, while the point (D) represents the boiling point of matter.

4) **Look at the following figure, then complete the following sentences using the words below:**



(heat — cool — expansion — contraction — kinetic)

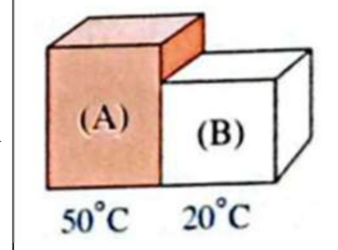
a) **When we heat the ball, the kinetic energy of its molecules increases.**

b) **After heating the ball, the ball cannot pass as a result of its expansion.**

c) **If we cool the ball, it can pass through the ring again as a result of its contraction.**

****

5) **Look at the following figure, then complete the following sentences:**



a) **In the opposite figure, heat transfers between the two metal cubes from cube (A) to cube (B) by conduction.**

b) **Heat transfer stops between the two metal cubes when they reach the same temperature.**

c) **The final temperature of the two metal cubes at thermal equilibrium equal 35 °C.**

مجانا وحصريا

حمل الان

المراجعة رقم (3)









Final Revision

(1) Write the scientific term :

1) It is often located at the center of the cell (..............................)

2) The materials that are attracted to the magnet. (..............................)

3) The organ that controls the level of sugar in the human body (..............................)

4) Component of cell that allows water to enter and exit the cell (..............................)

5) The materials that the electric charges can flow through. (..............................)

6) A hormone that controls the level of sugar in the human body. (..............................)

7) They are materials that slow down the heat transfer through them. (..............................)

8) A form of energy produced from generators and turbines. (..............................)

9) It surrounds the plant cell to give it a definite shape (..............................)

10) They are muscles that you can control their movement. (..............................)

11) The area around the magnet in which its force appears (..............................)

12) A device used to measure the temperature. (..............................)

13) They are living organisms, and their bodies consist of more than one cell (..............................)

14) A device can be used to magnify cells, so we can see them. (..............................)

15) It is a group of tissues that perform a specific function (..............................)

16) It is a group of organs that perform a specific function. (..............................)

17)	The structure that controls cell division and other cell activities.	(……………………………)
18)	A liquid found in the cell that holds its organelles.	(……………………………)
19)	They are saclike organelles that store nutrients, water, and Wastes.	(……………………………)
20)	An organ that sends a signal to muscles to begin responding to any threat	(……………………………)
21)	Muscles that move automatically without thinking of it.	(……………………………)
22)	The system that is responsible for eliminating carbon dioxide from the body.	(……………………………)
23)	They are materials that are attracted to a magnet	(……………………………)
24)	It is a closed loop for transmitting an electric current.	(……………………………)
25)	It's the type of a circuit you would find in your house.	(……………………………)
26)	It's a device used to detect a small electrical current in a circuit	(……………………………)
27)	It's a device used to help people with irregular or slow heartbeats	(……………………………)
28)	It's an apparatus used to measure the temperature of substances	(……………………………)
29)	It is the change of matter from a solid state to a liquid state by heating.	(……………………………)
30)	It's the temperature at which a substance changes from a solid to a liquid state	(……………………………)
31)	It is an indicator of how hot or cold a substance is.	(……………………………)
32)	It is the total sum of the kinetic energy of a substance's atoms and molecules	(……………………………)
33)	It's the process of changing a substance from a liquid into a solid	(……………………………)
34)	It's the process of changing substance from a liquid into a gas.	(……………………………)
35)	It is the transfer of heat through space or air.	(……………………………)

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✹(2) Choose the right answer:

1. The .... energy is related to the motion of particles of matter.
   a. chemical b. potential c. light d. thermal

2. The systems of the human body get their needed energy from ....
   a. the Sun. b. water. c. food. d. carbon dioxide.

3. Heat is transferred through solids by ....
   a. radiation only. b. conduction and convection.
   c. conduction only. d. radiation and convection.

4. Urination process happens by the help of .... system.
   a. digestive b. urinary c. respiratory d. skeletal

5. Changing from gas to liquid is called ....
   a. melting. b. evaporation. c. condensation. d. freezing.

6. Most plants appear in .... color due to the presence of chlorophyll pigment in their cells.
   a. yellow b. blue c. red d. green

7. Materials.................... on heating.
   a. expand b. contract c. compress d. do not change

8. In a dangerous situation, your eyes send the information to the .... to perform the suitable action.
   a. brain b. stomach c. lungs d. heart

9. Cardiac muscles are type of involuntary muscles which form the ....
   a. stomach. b. intestine. c. lungs. d. heart.

10. .... is used to slow the flow of an electric current in the electric circuit.
    a. A battery b. A switch c. A resistor d. A lamp

11. The smallest tiny structures that build up all living organism's bodies are ....
    a. systems. b. cells. c. organs. d. bricks.

12. Magnets can be made of ....
    a. copper. b. glass. c. iron. d. plastic.

13. All the following are multicellular organisms, except ....
    a. humans b. bacteria c. plants d. animals

14. A living organism grows and reproduces by increasing the .... of its body cells.

a. number b. size c. volume d. length

15. The .... surrounds the cytoplasm and controls the substances that enter or leave the cell.

a. cell wall b. nucleus

c. cell membrane d. mitochondrion

16. The .... is/ are responsible for cellular respiration.

a. cell wall b. nucleus

c. plasma membrane d. mitochondria

17. The .... surrounds the plant cell from outside and gives it a definite shape.

a. nucleus b. cell wall

c. cytoplasm d. cell membrane

18. The .... release(s) energy from food to power the cell.

a. mitochondria b. cell wall

c. nucleus d. cell membrane

19. All the following are involved in excretion process, except the ....

a. urinary system b. skin

c. digestive system d. respiratory system

20. Urine leaves the kidneys and passes to the ....

a. urethra b. nephron c. blood d. bladder

21. Insulin is produced by the ....

a. liver b. stomach c. gallbladder d. pancreas

22. The .... system controls the body temperature and blood pressure.

a. digestive b. respiratory c. urinary d. endocrine

23. When you are stressed out, your .... increase(s).

a. heartrate only b. blood pressure only

c. bones' size d. heartrate and blood pressure

24. .... are microscopic filters found in each kidney.

a. Glands b. Bladders c. Nephrons d. Blood vessels

25. The heartbeats in the .... system accelerates when feeling afraid.

a. urinary b. nervous c. circulatory d. digestive

26. Sweat is excreted by the ....

a. skin b. lungs c. heart d. kidneys

27. The .... is the space around a magnet where its force appears.

a. magnetic pole b. magnetism
c. magnetic field d. magnetic material

28. .... are used to run electric generators.

a. Light bulbs b. Turbines c. Iron nails d. Batteries

29. The generator produces .... energy.

a. mechanical b. chemical c. light d. electrical

30. All the following are electric insulators, except ....

a. rubber b. wood c. copper d. plastic

31. A .... is used to indicate the current in a circuit depending on the magnetic field.

a. resistor b. galvanometer c. battery d. generator

32. On heating wax, it will ....

a. turn into solid b. melt c. freeze d. get cooled

33. The thermal energy of the particles .... when the substance is cooled.

a. increases b. decreases c. is doubled d. won't change

34. .... energy is the total sum of kinetic energy of the substance molecules.

a. Thermal b. Chemical c. Light d. Potential

35. All the following are liquids, except ....

a. mercury b. water vapor c. food oil d. water

36. The boiling point of water is ....

a. 50°c b. 30°C c. 0°c d. 100°c

37. .... energy is the energy of motion.

a. Kinetic b. Light c. Sound d. Chemical

38. Molecules of water are packed tightly together in its .... state.

a. solid b. liquid c. gaseous d. plasma

39. The liquid in a thermometer .... as the temperature increases.

a. contracts b. expands c. disappears d. freezes

40. The main idea of the thermometer is to change the .... of a liquid by changing the temperature.

a. mass b. weight c. color d. volume

41. Heat is a form of ....

a. energy b. matter c. physical state d. metals

42. When matter becomes cooler, the .... energy of the molecules decreases.

a. light b. kinetic c. magnetic d. electrical

43. .... is the transfer of heat due to the movement of a liquid or gas molecules.

a. Conduction b. Radiation c. Convection d. Freezing

44. .... is made from chemical changes to some of the petroleum compounds.

a. Plastic b. Steel c. Glass d. Concrete

45. When the Sun heats up a rock, its particles will ....

a. slow down b. speed up c. stop moving d. lose energy

46. .... is the condition where two objects exchange no heat as they have the same temperature.

a. Thermal energy b. Thermal equilibrium

c. Chemical equilibrium d. Heat transfer

47. .... exist in both plant and animal cells.

a. Cell wall b. Cell membrane

c. Chloroplasts d. Large vacuole

48. All the following are magnetic materials, except ....

a. nickel b. steel c. iron d. copper

49. When water vapor .... it turns into water drops.

a. melts b. evaporates c. condenses d. freezes

50. Humans are .... organisms.

a. multicellular b. unicellular c. prokaryote d. simple

51. The .... is used to open and close the electric circuit.

a. wire b. switch c. electric lamp d. battery

52. The electric circuit is composed of all the following, except a ....

a. battery b. switch c. wire d. piece of paper

53. Heat will flow from a .... substance to a .... substance.

a. hotter, colder b. frozen, melted c. colder, hotter d. larger, smaller

54. The .... is the building unit of the living organism's body.

a. brick b. cell c. organ d. blood

55. Sunlight and heat reach Earth by ....

a. conduction b. condensation c. convection d. radiation

56. A group of similar cells are organized together to form a/an ....

a. system b. organ c. tissue d. organelle

57. When a bulb consists of three bulbs in a circuit is burned out, the other two bulbs turned off, then the bulbs must be connected in ....

a. parallel b. series c. square d. non- consecutive

58. On heating a substance, all the following increase except its ....

a. volume b. particles speed c. mass d. thermal energy

59. When an electric current flows through a wire, a/an .... field is produced around the wire.

a. electric b. gravitational c. magnetic d. thermal

60. The .... is used to measure the object's temperature.

a. measuring cup b. measuring tape

c. thermometer d. balance

61. The generator changes the mechanical energy into .... energy.

a. light b. electrical c. thermal d. magnetic

62. The .... surrounds the plant cell from the outside.

a. cell wall b. cell membrane

c. nucleus d. cytoplasm

63. Digestion process starts in the ....

a. stomach b. mouth c. esophagus d. large intestine

64. .... and .... are preferable to make the handles of cooking pans.

a. Plastic, steel b. Plastic, copper c. Copper, wood d. Plastic, wood

65. .... is the process of changing liquid into solid by cooling.

a. Melting b. Freezing c. Evaporation d. Condensation

(3) Complete the following sentences using the words below

1. **(plastic – conductors - non-magnetic - cell membrane - cell wall)**

1. Thermal .... materials allow heat to travel freely through them
2. Copper and .... will not attract to the magnet as they are .... materials.
3. The outermost layer of the plant cell is the .... while it is .... in the animal cell.

2. **(diaphragm - hormones - endocrine system - particles - contraction)**

1. During a fight-or-flight response, ... are released by the ....
2. When the .... muscle contract, the lung take in air.
3. Any compound consists of ....
4. Thermal .... occurs as the liquid in the thermometer is cooled.

3. **(turbines - series - steam - heartbeats - parallel)**

1. In a .... circuit, each bulb has its own circuit.
2. When water boils, it produces .... that causes .... to rotate.
3. In a .... circuit, the electric current passes through only one path.
4. A pacemaker helps patients who have irregular ....

4. **(colder - hotter - nucleus - kidneys - muscles)**

1. The .... purify blood from the waste materials.
2. The .... is the main control center of the cell.
3. The .... are long fibers that allow the body movement.
4. Heat transfers from a .... object to a .... one.

5. **(Cell wall - heart rate - Copper- thermal equilibrium)**

1. In case of .... there's no heat flows between two substances.
2. In a dangerous situation, your .... increases .
3. .... surrounds the cell membrane in a plant cell.
4. ....is not attracted to the magnet.

(4) Put (√) or (X) :

1. In series circuits, the electric current can flow in different branches. ( )
2. We can measure the temperature by using thermometers. ( )
3. Matter can't be changed from one form to another. ( )
4. If your body doesn't get rid of waste, you will be healthy. ( )
5. In electric iron heat transfers from cloth to iron. ( )
6. When a liquid is cooled, it may change into gas. ( )
7. Chloroplasts are found in the cells of banana plant leaves. ( )
8. Expansion and contraction are two opposite processes. ( )
9. Bacteria and horse are considered as multicellular organisms. ( )
10. The heart is important in our body as it helps in food digestion. ( )
11. Thermal conductors are good conductors of heat. ( )
12. Cell biologists are scientists who study rocks. ( )
13. Expansion and contraction of matter occur due to changes in temperature. ( )
14. Molecules of cold or hot substances always move. ( )
15. No spaces are left between railroad tracks. ( )
16. Magnets attract the non-magnetic materials such as iron, nickel and steel. ( )
17. Heat flows from a colder substance to a hotter substance. ( )
18. All systems in your body work together in an integrated way. ( )
19. Both the heart and stomach are considered tissues. ( )
20. Mitochondria are the part that is responsible for the cellular respiration. ( )
21. The plant cell has a larger vacuole than that of the animal cell. ( )
22. The magnet has two poles. ( )
23. Electricity can't be related to magnetism. ( )
24. Water flowing on a dam can be used to move the turbines of a generator. ( )
25. The battery is the source of electric current in the electric circuit. ( )
26. Nickel is attracted to the magnet as it is a non-magnetic material. ( )

27. When a substance is cooled, the speed of its particles decreases.	( )
28. It is hard to shape glass in a solid state because it has a definite shape.	( )
29. All substances have the same boiling point.	( )
30. Particles inside water move faster than those of steam.	( )
31. When water vapor condenses, it turns into a solid.	( )
32. Freezing is the reverse process of melting.	( )
33. Heat energy can be transferred by conduction only.	( )
34. Wood is considered an insulator, while metals are thermal conductors.	( )
35. Multicellular organisms consist of only one single cell as the plant cell	( )
36. Heat transfers faster by decreasing the surface area of the substances.	( )
37. Gravity is the force that pulls objects towards the center of the Earth.	( )
38. Fridge is from the appliances that have a thermostat.	( )
39. Generators change electrical energy into mechanical energy.	( )
40. Bacteria are unicellular organisms.	( )
41. Matter in the liquid state has a fixed volume and a variable shape.	( )
42. Most cells are usually very small.	( )
43. Heat can't transfer through space.	( )
44. It is safe to touch the electric wires which are coated with plastic.	( )
45. Mitochondria power the cell with the needed energy.	( )
46. You can control the involuntary muscles.	( )
47. All the materials are good conductors of electricity.	( )
48. Liquids expand by cooling and contract by heating.	( )
49. Mitochondria are responsible for the cellular respiration	( )
50. The handle of an iron is made of plastic as it is a thermal conductor.	( )
51. On heating a matter, its particles move slower and take up more space.	( )
52. Heat can be lost, but it can't be transferred	( )
53. A metallic paper clips are electric insulators, while rubber is a conductor.	( )

54. Heat is measured in Celsius degrees.	( )
55. The small structures inside the cell are called organelles.	( )
56. In parallel circuit, there are multiple routes for the electric current.	( )
57. The space between particles will decrease when thermal energy is added.	( )
58. A Thermal energy is transferred in metals by radiation	( )
59. Metals expand by heating and contract by cooling.	( )

✸(5) Correct the underline

1	When the temperature of solids **increases**, their volume decrease	(………………………)
2	Friction **increases** the speed of moving objects.	(………………………)
3	group of different tissues can form **a cell.**	(………………………)
4	The electric **current** is the path for electricity that consists of many components.	(………………………)
5	We can see the cells of all living organisms with the **naked eye**	(………………………)
6	Substances in **gas** form have the least thermal energy.	(………………………)
7	Magnetism is a pulling or pushing force, while gravity is a **pushing** force only.	(………………………)

✹(6) Matching:

1

A	B
1. Plastic	**a.** is a source of electric charges in the circuit.
2. Muscle cells	**b.** heat is transferred between molecules of boiling water
3. By convection	**c.** are cells in the form of long fibers to allow movement
4. Battery	**d.** is used to make the electric iron handle.

1- **2-** **3-** **4-**

2

A	B
1. Nucleus	**a.** are responsible for the cellular respiration.
2. Cell membrane	**b.** controls all cell activities.
3. Cell wall	**c.** supports the plant cell from outside.
4. Mitochondria	**d.** controls the passing of substances into or out the cell

1- **2-** **3-** **4-**

3

A	B
1. Urea	**a.** is stored in bladder
2. Urine	**b.** is produced from breaking down proteins in body cells.
3. Iron	**c.** is a non-magnetic material that conducts electricity
4. Copper	**d.** is a magnetic material that conducts electricity

1- **2-** **3-** **4-**

4

A	B
1. Circulatory system	**a.** allow body movement.
2. Musculoskeletal	**b.** releases hormones into the body
3. Endocrine system	**c.** breaks food into molecules that the body absorbs
4. Digestive system	**d.** transports gases, hormones and nutrients through the body.

1- **2-** **3-** **4-**

5

A	B
1. Battery	**a.** packages and transports protein within and outside the cell
2. Thermometer	**b.** is the source of the electric current in the electric circuit
3. Golgi apparatus	**c.** is a muscle that contracts to let oxygen gas enter the body
4. Diaphragm	**d.** is the measuring tool of temperature

1- **2-** **3-** **4-**

6

A	B
1. Heart	**a.** is the way through which Sun heat reaches the Earth.
2. Electrons	**b.** are used to slow the flow of electrons through a circuit.
3. Radiation	**c.** are small electric charges moving in the wires in a closed electrical.
4. Electric resistors	**d.** is an organ of the circulatory system that is made up of a involuntary muscle.

1- **2-** **3-** **4-**

7

A	B
1. Musculoskeletal system	**a.** is a source of thermal energy.
2. A compound microscope	**b.** allows body movement.
3. Human body	**c.** can be used to examine the thin membrane of the onion.
4. The Sun	**d.** is a good conductor of electricity:

1- **2-** **3-** **4-**

✹(7) Give reason:

1. Cats are considered as multicellular organisms
2. Stomach secretes a digestive fluid when the food reach it.
3. The heart has a natural pacemaker.
4. Cobalt and nickel are considered as magnetic materials.
5. Particles of steam have higher thermal energy than particles of water
6. The lower part of an electric iron is made of iron.
7. You feel heat, when you touch a metal spoon placed in a hot cup of tea.
8. The plant cell has a definite shape, but the animal cell doesn't.
9. Mitochondria have an important role in the cell.
10. Animals can't make their own food.
11. When facing danger, your blood pressure increases.
12. Resistors might be used in an electric circuit.
13. A galvanometer needle deflects on moving a magnet inside a coil.
14. Bridges and other structures are often built with expansion joints.
15. An ice cube melts when you hold it in your hand.
16. Cooking pots are made of metals, while their handles are made of plastic.
17. The excretory system keeps the body healthy.
18. Bacteria are considered unicellular organisms.

✹(8) What happens to ... ?

1. Molecules' movement of a hotter substance after mixing it with a cooler substance
2. The mass of a piece of butter after melting it.
3. A magnet is approached close to some iron nails mixed with small pieces of paper
4. The level of alcohol inside a thermometer if we put it inside cold water.
5. The lungs when the diaphragm muscle contracts
6. The animal cell is surrounded by cell wall
7. There is much water enters the cell.
8. If pancreas doesn't make its function correctly
9. To the human body when the heartbeats increase during danger.
10. If you heat a piece of butter
11. If no spaces are left between the railroad tracks.
12. If you touch a hot metal spoon placed in a hot cup of tea.
13. If the switch is closed in the electric circuit.
14. If your body doesn't get rid of waste.

✹ (9) **Cross odd word:**

1. Conduction - Convection - Friction - Radiation.
2. Plastic - Copper - Iron -Aluminum.
3. Air - Copper - Wood - Glass.
4. Human - Fish - Plant - Bacteria.
5. Urine - Oxygen gas - Carbon dioxide - Sweat.
6. Oil - Milk - Iron - Vinegar
7. Blood cell - Stomach - Lung - Liver
8. Plants - Humans - Bacteria – Animals
9. Stomach - Heart - Esophagus - Mouth
10. Plastic - Rubber - Iron - Wood
11. Aluminum - Iron - Copper - Cloth
12. Cloth - Iron - Plastic - Wood
13. Convection - Conduction - Freezing – Radiation
14. Nickel - Steel - Iron – Copper
15. Steam - Ice - Rocks – Glass

Model Answer

(1) Write the scientific term:

1. Nucleus
2. Magnetic material
3. Pancreas
4. Cell membrane
5. Electric conductor
6. Insulin
7. Heat insulator
8. Electric energy
9. Cell wall
10. Voluntary muscle
11. Magnetic field
12. Thermometer
13. Multicellular organism
14. Microscope
15. Organ
16. System
17. Nucleus
18. Cytoplasm
19. Vacuole
20. Brain
21. Involuntary muscle
22. Respiratory system
23. Magnetic material
24. Electric circuit
25. Parallel connection
26. Galvanometer
27. Pacemaker
28. Thermometer
29. Melting
30. Melting point
31. Temperature
32. Thermal energy
33. Freezing
34. Evaporation
35. Radiation

(2) Choose the right answer:

1. D	12.C	23.D	34.A	45.B	56.C
2. C	13.B	24.C	35.B	46.C	57.B
3. C	14.A	25.C	36.D	47.B	58.C
4. B	15.C	26.A	37.A	48.D	59.C
5. C	16.D	27.C	38.A	49.C	60.C
6. D	17.B	28.B	39.B	50.A	61.B
7. A	18.A	29.D	40.D	51.B	62.A
8. A	19.C	30.C	41.A	52.D	63.B
9. D	20.D	31.B	42.B	53.A	64.D
10.C	21.D	32.B	43.C	54.B	65.B
11.B	22.D	33.B	44.A	55.D	

(3) Complete the following sentences using the words below

1.

1.conductor 2.plastic - nonmagnetic 3.cell wall – cell membrane

2.

1. hormones – endocrine system 2. diaphragm 3.particles 4. contraction

3.

1. parallel 2. Steam - turbines 3. series 4. Heartbeats

4.

1. kidneys 2.nucleus 3.muscles 4. Hotter - colder

5.

1. thermal equilibrium 2. Heart rate 3. Cell wall 4. copper

(5) Correct the underline

1. Decreases
2. Decreases
3. Organ
4. Circuit
5. Microscope
6. Solid
7. Pulling

(4) Put (√) or (X) :

1. (X)	11. (√)	21. (√)	31. (X)	41. (√)	51. (X)
2. (√)	12. (X)	22. (√)	32. (√)	42. (√)	52. (X)
3. (X)	13. (√)	23. (X)	33. (X)	43. (X)	53. (X)
4. (X)	14. (√)	24. (√)	34. (√)	44. (√)	54. (√)
5. (X)	15. (X)	25. (√)	35. (X)	45. (√)	55. (√)
6. (X)	16. (X)	26. (X)	36. (X)	46. (X)	56. (√)
7. (√)	17. (X)	27. (√)	37. (√)	47. (X)	57. (X)
8. (√)	18. (√)	28. (√)	38. (√)	48. (X)	58. (X)
9. (X)	19. (X)	29. (X)	39. (X)	49. (√)	59. (√)
10. (X)	20. (√)	30. (X)	40. (√)	50. (X)	

(6) Matching:

1.	1. d	2. c	3. b	4. a
2.	1. b	2. d	3. c	4. a
3.	1. b	2. a	3. d	4. c
4.	1. d	2. a	3. b	4. c
5.	1. b	2. d	3. a	4. c
6.	1. d	2. c	3. a	4. b
7.	1. b	2. c	3. d	4. a

(7) Give reason:

1. Because the bodies of cats consists of many cells.
2. To allow more food breakdown.
3. To create electrical currents that it sends out through the heart causing the heart to contract
4. Because they are attracted to the magnet.
5. Because particles of steam move faster than particles of water.
6. Because iron is a thermal conductor that allows heat to transfer through it.
7. Because the heat transfers from the metal spoon to the hand by conduction.
8. Because the plant cell is surrounded by cell wall which gives it its definite shape.
9. Because mitochondria provide the cell with its needed energy.
10. Because bodies of animals are made up of animal cells which don't have chloroplasts.
11. Because endocrine system secretes hormones which cause increasing of heartbeats rate to face the danger.
12. Because resistors are used to slow the flow of electrons through an electric circuit to avoid the damage of its components.
13. Because when the magnet moves inside the coil of wire, an electric current flows.
14. To keep bridges safe from buckling when they expand at high temperatures.
15. Because heat flows from the hotter substance (hand) to the colder substance (ice).
16. Because metal is a thermal conductor , while plastic is a thermal insulator
17. Because the excretory system collects the waste materials produced by cells and removes them from the body to keep the body healthy.
18. Because their bodies consist of one cell only.

✹(8) What happens to ... ?

1. The movement of molecules of the hotter substance becomes slower after mixing
2. The mass doesn't change.
3. The magnet will attract the iron nails but it will not attract the small pieces of paper.
4. Because alcohol expands by heating and contracts by cooling
5. The lungs take in the air rich in oxygen gas.
6. The animal cell will have a definite shape.
7. The cell will swell until it bursts.
8. The person will be infected with diabetes disease.
9. The heart pumps more blood to the muscles, the heart and other organs, and also the blood pressure increases.
10. It changes from solid state into liquid state.
11. Train accidents occur as a result of bending of tracks in hot weather.
12. Heat transfers from the spoon to your hand by conduction.
13. The electric circuit will be closed, so the electric current flows through the circuit.
14. The body will get sick.

✹ (9) Cross odd word:

1. Friction
2. Plastic
3. Air
4. Bacteria
5. Oxygen gas
6. Iron
7. Blood cell
8. Bacteria
9. Heart
10. Iron
11. Cloth
12. Iron
13. Freezing
14. Copper
15. Steam

حمل الآن

مجانا وحصريا

المراجعة رقم (4)

الترم الاول





Primary 6

Question 1

Choose the correct answer:

1. All the following materials are liquid materials, except .... a. petroleum. b. plastic. c. glass before cooling. d. concrete before drying.
2. All the following are from the waste materials are produced by your body, except .... a. urine. b. oxygen gas. c. carbon dioxide. d. sweat.
3. Meteorologists are scientists who study .... a. weather. b. rocks. c. water. d. cells.
4. When you heat water in a pot, molecules of .... a. hotter water move down and that of cooler water move up. b. hotter water move up and that of cooler water move down. c. hotter water stop moving. d. hotter water not be affected.
5. All the following parts are from the main parts of animal cell, except .... a. cell membrane. b. cytoplasm. c. cell wall. d. nucleus.
6. The organelles which provide the cell with the needed energy are called .... a. endoplasmic reticulum. b. Golgi apparatus. c. mitochondria. d. cell membrane.
7. Shrink-wrap is created when, we .... a. add heat to steel. b. cooling glass. c. cooling steel. d. add heat to plastic.

8. **When you examine a piece of onion under microscope using the low power objective lens, you will see the cells of onion in .... size.**
   a. small b. medium c. big d. very big

9. **Particles of all the following substances have a lot of energy, except ....**
   a. oxygen. b. carbon dioxide.
   c. water vapor. d. glass.

10. **Thermal Insulators ....**
   a. can prevent the transfer of heat completely through them.
   b. slow down the heat transfer through them.
   c. allow heat to travel freely through them.
   d. increase the speed of heat transfer through

11. **To make clothes we can use ....**
   a. steel. b. concrete. c. hard fabric. d. flexible fabric.

12. **Heat is transferred through copper and iron by ....**
   a . radiation only. b. radiation and convection.
   c . conduction only. d. conduction and convection.

13. **The state(s) of matter with the least amount of energy is/are ....**
   a. solid. b. liquid. c. gas. d. solid and liquid.

14. **Limestone is considered from the components of ....**
   a. plastic. b. shrink-wrap. c. smart cloth. d. glass.

15. **The process of expelling urine from the body is called .... process.**
   a. urination b. respiration c. digestion d. sensation

16. **Thermal energy affects .... and .. .. of a matter.**
   a. temperature - state b. temperature - color
   c. color – taste d. color- smell

17. All the following are properties of steel, except ....

a. it is a mixture of rock and sand.

b. it is a mixture of iron and other elements.

c. it is strong material.

d. it lasts for a long time.

18. Diabetes disease occurs due to a disturbance in one organ of........... system,

a. respiratory b. nervous c. endocrine d. urinary

19. Magnets can be made of ....

a. Copper. b. glass. c. iron. d. plastic.

20. On boiling water inside a kettle, ...

a. water particles will move faster.

b. water particles will move slower.

c. thermal energy of water will decrease.

d. thermal energy of water will not change.

21. People who suffer from diabetes can use the insulin pump device that inject, the body automatically with ....

a. sugar. b. water. c. insulin. d. carbohydrate

22. In which state(s) of matter are the molecules away from each other? ....

a. Solid. b. Gas. c. Solid and liquid. d. Solid and gas.

23. The normal heart has a....... which creates electrical current that cause the heart to ....

a. natural pacemaker - stop. b. natural pacemaker - contract.

c. artificial pacemaker -stop. d. artificial pacemaker - contract.

24. Due to the friction between a moving object and a flat road the .... energy of the moving object changes into .... energy.

a. kinetic - thermal b. thermal - kinetic

c. potential - thermal d. kinetic - potential

25. When wax melts, its particles ....

a. gain thermal energy and speed up.
b. gain thermal energy and slow down.
c. lose thermal energy and speed up.
d. lose thermal energy and slow down.

26. The source of electricity in any electric circuit may be ....

a. metal wire. b. switch. c. battery. d. an electric lamp.

27. The function of saliva inside your mouth is ......

a. cutting up the food into smaller parts.
b. softening the food and breaking it down.
c. transporting the food into stomach.
d. transporting the food through body organs.

28. Walls of small intestine contain …………which responsible for absorbing nutrients of digested food.

a. blood vessels b. hairs
c. glands d. nephrons

29. Insulin hormone is responsible for regulating the level of........... in blood.

a. proteins b. fats c. water d. sugar

30. Some materials cannot be attracted to the magnet because they are…….

a. magnetic materials.
b. made of nickel, iron and cobalt.
c. non-magnetic materials.
d. located at the magnetic field of the magnet.

31. The area around the magnet in which its force appears is known as ....

a. Magnetic field. magnetism. c. electric current. d. gravity.

32. **When a car goes down on a ramp its .... energy changes to .... energy.**

a. kinetic - potential b. potential - kinetic
c. sound - potential d. light - potential

33. **The electric circuit contains .... which is responsible for opening and closing the circuit.**

a. a battery b. a switch c. a lamp d. a heater

34. **When we throw a ball upward it returns back to the Earth due to……………**

a. gravity only. b. electricity and mass.
c. Magnetism only. d. magnetism and electricity.

35. **Due to the friction force between a moving object and a flat road, the speed of a moving object ....**

a. decreases then increases.
b. decreases.
c. not be affected.
d. increases.

36. **Pancreas belongs to........... system and its secretions help in completing …………. process.**

a. endocrine - digestion b. circulatory - respiration
c. digestive – urination d. endocrine - sensation

37. **The mass of a substance doesn't change when this substance changes from one state into another, this is the law of conservation of ....**

a. mass. b. energy. c. volume. d. state.

38. **When the switch is turned off, it .... the circuit, so the electric current ....**

a. open - will flow through. b. open - will not flow through.
c. close - will pass through. d. close - will not pass through.

39. **When we put a piece of aluminum foil close to a magnet, it will………**
a. be attracted to the magnet. b. be a magnet.
c. not attract to the magnet. d. repel with the magnet.

40. **Muscles of heart........... to pump the blood carrying oxygen to all body cells.**
a. contract only b. relax only
c. contract and relax d. neither contract nor relax

41. **The lungs take in air when the diaphragm …………, while they release the air when the diaphragm…………..**
a. contracts — contracts. b. contracts — relaxes.
c. relaxes — relaxes. d. relaxes — contracts.

42. **Among the muscles which you cannot control their movement are ....**
a. hand muscles. b. eyelid muscles.
c. leg muscles. d. arm muscles.

43. **When you face a dangerous situation, circulatory system do all the following, except …..**
a. your heartbeats increase.
b. muscles of your body relax.
c. heart pumps more blood to the muscles.
d. the blood pressure increases.

44. **……… can be found in toasters and ....**
a. Microwaves -electric stoves. b. Resistors -electric stoves.
c. Electric stove - resistors. d. Microwaves -electric resistors.

45. **………. is used to slow the flow of an electric current in the electric circuit.**
a. A battery b. A switch c. A resistor d. A lamp

46. ………… are used to stop the flow of electricity.

a. Resistors
b. Electric conductors
c. Electric insulators
d. Galvanometers

47. By increasing the temperature of a substance, its molecules move .... each other and the spaces between them ....

a. farther away- increase.
b. nearer to - increase.
c. farther away- decrease.
d. farther away- decrease.

48. In the........ circuit, all components are connected in one loop

a. open parallel
b. closed parallel
c. open series
d. closed series

49. Scientists use a............ to detect the flow of small electric currents.

a. generator
b. galvanometer
c. battery
d. switch

50. All the following are properties of heat, except ....

a. it is an essential component of life on Earth.
b. it cannot be lost but it is only transferred.
c. it flows from a cooler object to a hotter object.
d. it flows from a hotter object to a cooler object.

51. .... is the best material to make handles of cooking pots, as it doesn't warm fast.

a. Iron
b. Plastic
c. Wood
d. Copper

52. Magnet affects certain objects like ………… when they locate in its magnetic field

a. wood and steel
b. nickel and plastic
c. iron and copper
d. cobalt and steel

53. The flow of electric charges along a closed path causes ......

a. electric circuit.
b. light energy.
c. electric current.
d. sound energy.

54. **A metallic rod of 50 meter length was heated at high temperature, its length could reach .... meter after heating.**

a. 47 b. 48 c. 49 d. 51

55. **If you stand on hot sand in bare feet, you will feel the hotness of the sand because ....**

a. heat transfers from your legs to sand.

b. heat transfers from sand to your legs.

c. your legs are hotter than sand.

d. your legs and sand have the same temperature.

56. **Plastic ....**

a. is a liquid material.

b. burns easily.

c. is originated from petroleum.

d. is a gaseous material.

57. **The blood which carries the waste materials, enters each kidney through a large ....**

a. vein. b. artery. c. blood capillary. d. ureter.

58. **the artificial pacemaker contains a .... to send information to physicians, so they know the condition of the ....**

a. battery — lung.

b. motherboard — brain.

c. built-in antenna — heart.

d. battery — heart.

59. **To make bridges we can use ....**

a. flexible fabric. b. concrete. c. smart clothes. d. glass.

60. **When the temperature of alcohol inside thermometers increases, its volume………**

a. increases causing its contraction.

b. decreases causing its expansion.

c. decreases causing its contraction.

d. increases causing its expansion.

61. If there are a small car and a truck move down on the same ramp, ...

a. the car moves faster than the truck.
b. the car and the truck move with the same speed.
c. the truck moves slower than the car.
d. the truck moves faster than the car.

62. Resistors are found in all of the following devices, except ....

a. toasters   b. microwaves.   c. electric stove   d. batteries.

63. Concrete ....

a. becomes liquid after it dries.
c. controls your body temperature.
b. consists of rock, sand and water.
d. is originated from petroleum.

64. Magnets are used in generators and .... to generate ....

a. turbines - sound.   b. switches - sound.
c. lamps - heat.   d. turbines - electricity.

65. Generators are used in……….

a. building houses and heating water.
b. lighting houses and operating electric devices.
c. producing sound energy.
d. generating thermal energy.

66. The final temperature of two mixed substances with different temperatures is less than that of the .... substance and greater than that of the .... substance.

a. hotter - cooler   b. cooler - hotter
c. bigger - smaller   d. smaller- bigger

67. The smallest tiny structures that build up all living organism's bodies are ....

a. systems.   b. cells.   c. organs.   d. bricks.

68. **The body of .... is composed of one cell only.**

a. human b. bacteria c. a big tree d. an elephant

69. **Growth of a living organism is resulted from increasing the .... of cells in its body.**

a. length b. size c. number d. mass

70. **The cell needs .... to get its needed energy and to stay alive.**

a. oxygen only b. water only

c. food and water only d. food, oxygen and water

71. **All the following are from the characteristics of muscle cells, except that they ....**

a. are in the form of long fibers.

b. can work alone due to their large sizes.

c. must be able to store and use energy quickly.

d. can be bundled together to form tissues.

72. **When the temperature of a rod of iron increases,……….**

a. it length increases. b. its length decrease

c. its length doesn't change. d. its mass increases

73. **Melting point of a substance is the temperature at which .... changes into ....**

a. solid - liquid b. liquid - gas

c. gas - liquid d. liquid - solid

74. **As a result of heat flow through metals, they ....**

a. expand. b. contract. c. get smaller. d. are not affected.

75. **If you pour a cup of water with temperature 30°C to another cup of water with temperature 80°C, the final temperature of the mixture may be ....**

a. 80°C b. 30°C c. 50°C d. 110°C

76. **Matter .... , it just changes from one state lo another.**
a. neither be created nor destroyed
b. can be created and destroyed
c. can't be created but destroyed
d. can be created but can't destroyed

77. **Expansion joints are designed to allow concrete .... when temperature .... .to keep bridges safe from buckling.**
a. expands - decreases b. expands - increases
c. expands - doesn't change d. contract - doesn't change

78. **The internal switch on a........... can be used in the refrigerator to adjust its temperature.**
a. battery b. thermostat c. light bulb d. wall socket

79. **When you melt 100 grams of chocolate bar, its mass after melting. is .... .100 grams.**
a. a lot less than b. a lot more than
c. a little more than d. equal to

Question 2

Choose from (A) what suits it in (B):

1.

(A)	(B)
1. Electricity	**a.** is a closed path through which electrons move
2. Battery	**b.** are materials that electric charges flow through.
3. Electric conductors	**c.** is a source of electric charges in the circuit.
4. Electric insulators	**d.** is used to open and close the circuit.
5. Electric circuit	**e.** are materials through which electrons can't flow.
	f. is a form of energy.

2.

(A) Type of matter	(B) Example	(C) Its particles have .... energy
1. Solid	a. steam	A. high thermal
2. Liquid	b. water	B. no thermal
3. Gas	c. sound	C. low thermal
	d. ice	D. moderate thermal

3.

(A)	(B)
1. Mitochondria 2. Endoplasmic reticulum 3. Cytoplasm 4. Golgi apparatus 5. Chloroplasts	**a)** All other cell parts float in it. **b)** They provide the cell with its needed energy. **c)** It helps in packing and transporting different materials between the cells and out of the cell. **d)** It is made up of cellulose **e)** It helps in collecting and transporting proteins inside the cell. **f)** It is responsible for making photosynthesis process inside plant cells.

4.

(A)	(B)
1. Plastic	a. is an essential component of life on Earth.
2. Metal	b. is used to make the electric iron handle.
3. Heat	c. is a thermal conductor.
	d. is the measuring unit of volume.

5.

(A)	(B)
1. Heat is transferred when you touch a hot metallic ball by	a. radiation.
2. Heat is transferred from the Sun to us through the space by	b. convection.
3. Heat is transferred between molecules of boiling water by	c. freezing.
	d. conduction.

6.

(A)	(B)
1. Smart cloth	a. is a mixture of iron and other elements.
2. Steel	b. can light up in the dark.
3. Concrete	c. is used to create plastic from petroleum.
4. Chemical change	d. is created by adding heat to plastic.
	e. is a mixture of rock, sand and water.

Question 3

Put (√) or (X):

1.	Excretion process is necessary to convert complex food into simpler substances.
2.	Molecules of solids move faster than molecules of liquids.
3.	Temperature is a measure of the average kinetic energy of the molecules of a matter.
4.	When mixing two substances with different temperatures, their average temperature is lower than their final temperature.
5.	Smart clothes can light up in dark places.
6.	The transformation of solid to liquid is called melting and the reverse process is called freezing.
7.	Studying a kidney model can save time, money and effort
8.	Without leaving spaces between railroad tracks, train accidents may occur.
9.	By decreasing the thermal energy, the kinetic energy increases
10.	Concrete becomes a liquid material after it dries
11.	When objects lose heat, they contract.
12.	Steel is made by chemical change of plastic.
13.	Railroad tracks are made up of iron.
14.	Plastic resists the transfer of thermal energy.

15.	When you add some cool water to hot tea the molecules of tea will move slower.
16.	Mitochondria convert sugar inside the cell into the needed energy to make the cell do its vital processes.
17.	When a substance expands, its volume increases
18.	Small pieces of paper can be used to see the magnetic field of a magnet.
19.	Cobalt is an example of magnetic materials.
20.	Digestive system can digest food without the help of nervous system.
21.	Expansion and contraction are two opposite processes.
22.	Air and glass can prevent the transfer of heat completely.
23.	Studying chemical structure of any material help us to know its properties.
24.	The thermostat in a refrigerator contains an automatic switch.
25.	All matter contain thermal energy
26.	Nucleus is found in the center of most cells.
27.	Endoplasmic reticulum is collecting and transporting proteins inside the cell
28.	The function of coarse focus and fine focus is making the image of sample very clear under microscope.
29.	No spaces are left between railroad tracks.
30.	Colon absorbs most of water from the undigested food that leaves the body.
31.	All cell parts which are found inside the cell are floating in cytoplasm.
32.	The digested food enters the colon as a soupy mixture.

33.	Circulatory system transports the digested food to different body organs.
34.	In dangerous situations, nervous system only allows your body to face the danger
35.	Thermal energy relates to the total sum of the kinetic energy of substance's atoms and molecules.
36.	Magnets attract the non-magnetic materials such as iron, nickel and steel.
37.	The movement of particles within an object is used to describe the thermal energy.
38.	Copper and rubber are electric conductors
39.	The magnet is surrounded by an area called magnetism in which the magnetic force of a magnet appears.
40.	All materials can be attracted to the magnet.
41.	Gravity is the force by which a magnet attracts some materials.
42.	Electricity is the force that affects all objects that has mass and attracts them towards Earth's center.
43.	The main waste product which is expelled by respiratory system is the urea
44.	A closed loop through which electric current can flow called a thermostat.
45.	Scientists use an artificial pacemaker to stimulate the heart muscle to beat regularly.
46.	The device which changes mechanical energy into electrical energy is a generator.
47.	The heart is important in our body as it helps in food digestion.

Question 4

Write the scientific term:

1. It is the measuring unit of heat.
2. The mass of a substance doesn't change when this substance changes from one state into another.
3. Device inserted into the chest to stimulate the heart to beat regularly.
4. They are sac-like organelles that contain tiny green granules and found in plant cells only.
5. An organelle which helps in packing and transporting different materials between the cells and out of the cell.
6. An organelle which helps in assembling and transporting proteins a. inside the cell to build and repair the cell
7. It is a measure of the average kinetic energy of molecules and atoms of a substance.
8. It is a microscopic filter that is found in the kidney and filters the blood from waste materials.
9. It is the change of matter from solid state to liquid state
10. The way by which the heat is transferred through solids only.
11. They are scientists who study the weather.
12. A substance which is formed due to the breakdown of proteins inside the body cells.
13. It is the organ which contracts and relaxes to help in the movement of the body.
14. The force that allows the magnet to attract some materials without making direct contact.

15. A process in which liquid molecules move slower and change to another state.

16. The decrease is the volume of a material as its temperature decreases.

17. Thermal insulator material used to make the handle of an electric iron

18. The area around the magnet in which its magnetic force appears,

19. Advice can be used to detect the flow of small electric currents

20. The force of earth which attracts all objects on its surface to its center.

21. A material consists of sand, limestone and soda ash

22. They are cell organelles that provide the cell with the needed energy.

23. They are muscles that attached to the bones of skeletal system.

24. A substance that is stored in liver and muscles, then converted into glucose when your body needs energy.

25. The organ which absorbs most of water from the undigested food.

26. It is the state of matter that has a fixed shape and spaces between its molecules are very narrow

27. Thermal conductor material used to make lower part of an electric iron that is used in ironing clothes.

28. Materials that allow electrons to flow through them easily.

29. One of the components of an electric circuit that is used to limit the flow of electricity through the circuit.

30. The way by which the heat is transferred through gases and space

31. Materials that don't allow electrons to flow through them easily.

32. A tool in the circuit which is used to open and close the circuit

33. Joints between parts of a bridge that allow its expansion without being damaged.
34. It is the smallest building unit of matter.
35. The way by Which the heat is transferred through liquids and gases.
36. It is the state that doesn't have fixed shape or volume.
37. It is a group of atoms bound together
38. It occurs when heat transfer stops between two objects reach the same temperature.

Question 5

Complete the following sentences:

1.	Molecules of warmer matter move .... than molecules of cooler matter.
2.	When you boil water in a pot, the molecules of .... water at the bottom of the pot move up and the .... of cooler water at the surface of the pot move .. ..
3.	We can save people's life when studying ………..... instead of a real kidney
4.	Some substances can pass through nephrons as. .... , while other substances cannot pass through nephrons as.............
5.	Magnetism is an attraction or………… force, while gravity is ……………. force only.
6.	The temperature at which solid changes to liquid is known as .... point.
7.	Matter neither be .... nor .... , but it just .... from one form to another.

8.	Matter consists of small building units called .... ,which consist of smaller units called ....
9.	When we cool a matter, the spaces between its molecules .... , but when we heat it, the spaces between its molecules ....
10.	The speed of heat transfer between objects .... when the surface area of objects increases.
11.	The human body uses sugar to get its needed .... for doing all vital activities.
12.	To see the magnetic field of a magnet, we should use …… filings
13.	Pancreas is one of the organs of............. system that produces .... hormone.
14.	To see the nucleus of a cell under microscope, we can stain the cell with ……..
15.	Molecules of cooler substance move .... after mixing it with hotter substance.
16.	Some waste products leave your body in the form of ……….. through your skin.
17.	Urine leaves each kidney through………and is collected in the…………. until it is expelled outside the body through ……
18.	Engineers use .... joints to keep bridges from buckling at high temperatures
19.	The gravity of Earth is affected by two factors which are…………..and………..
20.	Muscles of eyelid that allow you blink many times in one minute are consider as………muscles, while the muscles that help your eyeball to move in different directions are considered as…….muscles.
21.	Urine is composed of…………,other waste products and ……….

22.	Filtration of blood occurs inside the………… by the help of a microscopic filter known as………..
23.	The electric current causes .... in the human body as it contains ....
24.	There are materials known as .... that allow electrons to flow through as …………. and ………….
25.	By increasing the distance between objects and earth, the ………. force of earth …………
26.	Gravity attracts any object that has …………….
27.	Diabetics can control the blood sugar levels by using .... device which automatic injects the body with insulin.
28.	When mixing two substances with different temperatures, they reach the same temperature at ....
29.	To build a pacemaker,………… , an insulated electric wire with a coating and ………….are needed.
30.	When bridges are exposed to .... weather, the space between the molecules of expansion joints .... causing its expansion.
31.	Petroleum is a liquid material, while plastic is .... material.
32.	Chemical change of some compound of petroleum is used in making ....

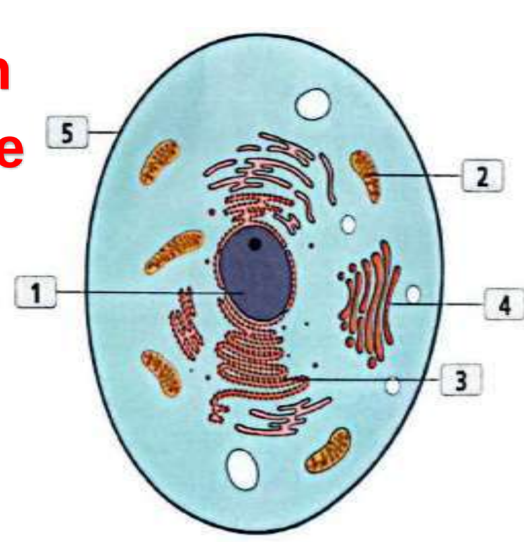
Question 6

a. Look at the opposite figure, then choose the correct answer:



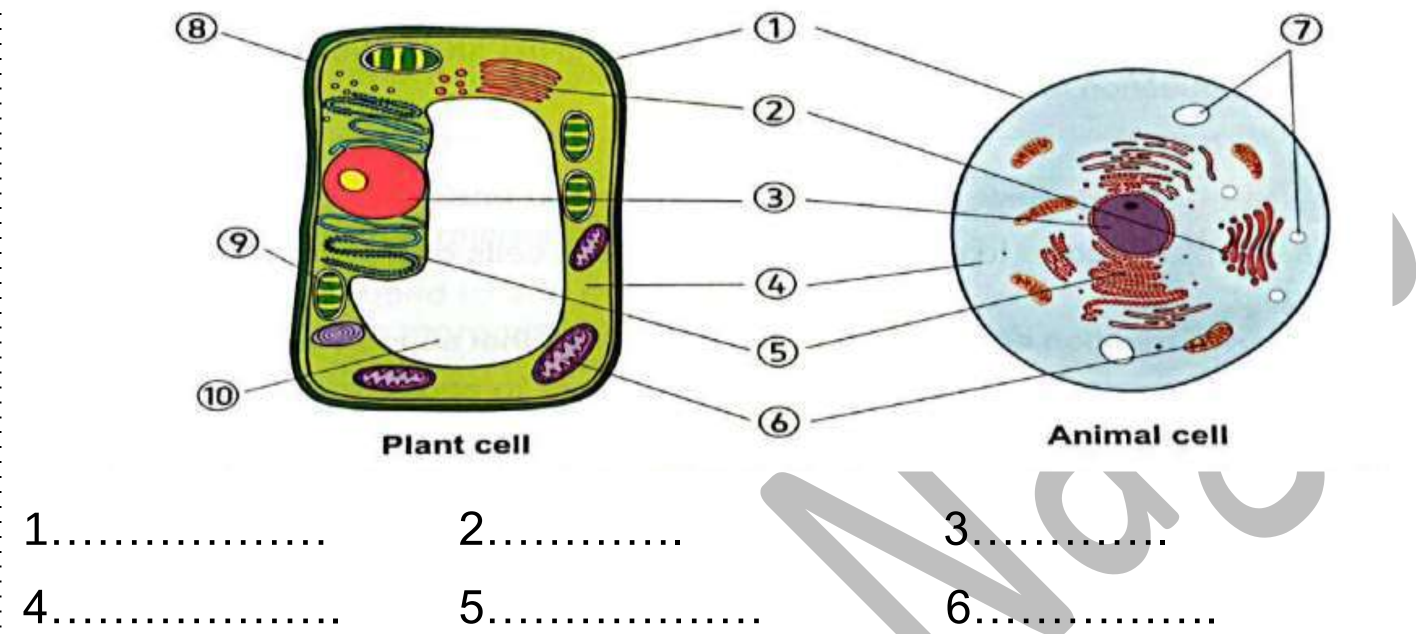
1. The filter in the figure is like ………… organ in the urinary system.
   (stomach — kidney)
2. Rice in the figure is like .... which cannot pass through nephrons during filtration of blood.
   (proteins — urea)
3. Mixture (A) is like .... which is found in the body
   (blood before filtering — blood after filtering)
4. Mixture (B) is like .... that comes out from the body.
   (filtered blood — urine)

b. Look at the following figure, then write the correct number beside the suitable sentence :



1. Powerhouses in the cell.
2. Control the cell division.
3. Assembling and transporting proteins.
4. Control the selective permeability feature.
5. Packing and transporting

c. Label the following figures that show the differences between plant cell and animal cell :



1……………… 2………… 3…………

4………………. 5……………… 6……………

7………….. 8……….. 9……………. 10 ……………

d. Look at the opposite figure, then complete the following sentences:


Figure (A) Figure (B)

1.The forearm in figure .... moves up toward your shoulder.
2. The forearm in figure .... moves down away from your shoulder.
3. The muscles in front of the upper arm contract in figure .... and relax in figure…..
4. The muscles in the back of the upper arm contract in figure... and relax in figure….

e. Look at the opposite figure, then answer the questions :

(4) (3) (1) (2)

a. Label the figure :

1……………. 2…………….

3……………. 4…………….

b. What is the function of device number ?

1...................... 2.....................

c. What happens if device number (1) is closed?

f. Look at the opposite figure, then answer the questions :

Figure (A) Figure (B)

a. Answer:

1. Which of these figures is a series circuit? ....
2. Which of these figures is a parallel circuit? ....

b. Put (✓) or (X):

1. If we remove a lamp from the circuit in figure (A), the other lamp will still lit ( )
2. If the switch in figure (B) is replaced by a metallic paper clip, all lamps will turn off. ( )

Question 7

Give reasons for:

1. **The cell needs energy**

   To carry out all its life activities and survive

2. **The cell allows water to go outside it**

   To keep the water balance on both sides of the cell membrane

3. **You cannot see the body of a bacteria with your naked eye**
   Because it consists of only one cell that cannot be seen by naked eyes
4. **Scientists tend to use microscope in their research**
   To discover more information about the cell and exchange these information
5. **We must rotate the coarse focus and fine focus during examining a sample under microscope**
   To see a clear image for the sample under the microscope
6. **Cats are considered as multicellular organisms**
   Because their bodies consist of many cells
7. **Plant cells can make photosynthesis process**
   Because they have chloroplasts on plant cells
8. **Both of endoplasmic reticulum and Golgi apparatus are involved in transportation process inside and outside the cell**
   Because endoplasmic reticulum transports protein inside the cell and Golgi apparatus transports different materials between the cells and out of the cell
9. **Plant cells have a definite shape**
   Because the plant cell is surrounded by cell wall which gives it the definite shape
10. **Chlorophyll absorbs the energy of the sunlight**
    To make the food of the plant through the photosynthesis process
11. **Mitochondria act as electric power stations in cities**
    Because they provide the cell with its needed energy
12. **Vacuoles act as storehouses in cities**
    Because they store nutrients, water, and waste materials
13. **Some cell biologists work with doctors**
    To watch how cells can work to repair body parts or how cells respond to different medicines

14. **We must stain cells before examining them under microscope**
    Because cells are usually clear and colorless, so it is hard to see them under microscope
15. **Digestive system helps skeletal system in fracture healing**
    Because it provides the skeletal system with nutrients needed for fracture healing
16. **The importance of nervous system for the muscles of heart**
    Because it controls the movements of heart muscles
17. **Muscle cells don't work alone**
    Because the size of the muscle cell is very small
18. **Skeletal system cannot do the function of movement without muscular system**
    Because skeletal muscles that is attached to bones of skeletal system allow bones to move
19. **Cardiac muscles are considered as involuntary muscles**
    Because they move automatically, and you cannot control their movement
20. **Cardiac muscles contract and relax without stopping**
    To allow the heart pumps the blood carrying oxygen to all the body cells
21. **The muscles that surround the eyeball are considered voluntary muscles**
    Because you can control the movement of the eyeball muscles
22. **When the body faces a danger, the heartbeats increase**
    Because endocrine system secretes hormones which cause increasing of heartbeats rate to face danger
23. **The body needs to convert complex food into simpler substances**
    Because the body cells need these simpler structures to get energy and grow

24. **Saliva plays an important role in digestion of food inside the mouth**
    Because saliva softens the food and start breaking down it
25. **Stomach secretes a digestive fluid when the food reaches it**
    To allow more food breakdown
26. **Walls of small intestine contain blood vessels**
    To carry the nutrients to all body parts
27. **Undigested food becomes solid mass inside the large intestine**
    Because the large intestine absorbs most of water from the undigested food
28. **The liver and muscles convert the stored glycogen into glucose sugar**
    To provide the body with its needed energy
29. **The digestive system does not share in excretion process**
    Because it does not work on the waste materials produced from burning food inside the body cells
30. **The two kidneys contain many nephrons**
    To filter the blood and remove harmful substances from the body
31. **Formation of urea inside the human body**
    Due to the break down proteins inside the body cells
32. **Blood cells and proteins cannot pass through the kidney's nephrons**
    Because blood cells and proteins are large
33. **Diabetic must give themselves regular shots of insulin**
    To regulate the sugar level in blood
34. **The electric circuit is considered as a system**
    Because it is a path for electricity that consists of many components work together as one system
35. **Cobalt and nickel are considered as magnetic materials**
    Because they are attracted to the magnet

36. Wood and copper are not attracted to the magnet

Because they are non-magnetic materials

37. Electric generators have great importance in our life

Because they are used in lighting houses and operating electrical devices

38. Most electric wires are covered with rubber or plastic

Because they are bad conductors of electricity to protect people from electric shock

39. Some electric circuits contain resistors

To slow the flow of electrons through the electric circuit to prevent its components from damage

40. In the parallel circuit, we can turn off or remove one light bulb while the other light bulbs will remain lit

Because in parallel circuit, the electric current flows along different branches

41. When a magnet is moved rapidly back and forth inside a coil, the needle of the galvanometer connected to the coil moves rapidly

Because electric current is produced

42. Scientists provide the new artificial pacemaker by a built-in antenna

To send information to physicians, so they know how the heart is behaving

43. The heart has a natural pacemaker

To create electrical currents causing the heart to contract

44. Ice melts when it is put in a hot cooking pan

Because heat flow from the hotter substance (pan) to the colder substance (ice)

45. Matter may change from one state to another

Because the thermal energy of a matter may change causing a change in the state of matter

46. **Evaporation and condensation are two opposite processes**
   Because a matter changes from liquid state into gas state in evaporation while it changes from gas state to liquid state in condensation
47. **Food coloring takes less time to spread out in the hot water than in cold water**
   Because hot water has more thermal energy, so its molecules have more kinetic energy and move faster
48. **Engineers use expansion points in the designing of bridges**
   To keep bridges safe from buckling when they expand at high temperatures
49. **The level of alcohol inside a thermometer rises up if we put it inside hot water and goes down if we put it inside cold water**
   Because alcohol expands by heating and contracts by cooling
50. **Matter expands when its thermal energy increases**
   Because kinetic energy of molecules increases and the spaces between them increases causing its expansion
51. **The size of a balloon decreases if it is subjected to cold weather**
   Because the air inside it contracts by cooling
52. **Small spaces are left between the railroad tracks**
   To allow the tracks to expand in hot weather without being bent to avoid train accidents
53. **The handle of an electric iron is made of plastic**
   Because plastic is thermal insulator than doesn't allow heat to transfer
54. **The lower part of an electric iron is made of iron**
   Because iron is a thermal conductor that allows heat to transfer
55. **Sometimes the final temperature of a mixture of two substances with different temperatures is less than their average temperature**

Because some of the thermal energy transfers to the air or the container

56. **Heat transfer stops after a while between two mixed substances with different temperatures**
    Because they reach the same temperature at thermal equilibrium

57. **After mixing two substances with different temperatures, the molecules of the hotter substance move slower**
    Because the molecules temperature of hotter substance decreases

58. **The vibration of molecules of a matter increases when it becomes warmer**
    Because when a matter becomes warmer, the kinetic energy of its molecules increases so their vibration increases

59. **You feel the heat of the sun although there is a space between the sun and Earth**
    Because heat transfer through the space by radiation

60. **Aluminum and copper are good conductors of heat**
    Because they allow heat to travel freely through them

61. **Glass and wood are bad conductors of heat**
    Because they slow down the transfer of heat

62. **The mass of ice cubes before melting equals to their mass after melting**
    According to the law of conservation of mass, the mass of ice cubes does not change when ice changes from solid state to liquid state

63. **Decreasing of mass of popcorn grains which have some moisture after cooking them**
    Because of the evaporation of the water during cooking pop corn

64. **Plastic is better than wood to make the handle of cooking pots**
    Because plastic warms slower than wood

65. **Due to friction force, the tire of a moving car becomes hot**
    Because friction force changes kinetic energy into thermal energy

66. **A truck is faster than a small car when both of them move down on the same ramp**
Because the truck has mass more than the small car, so the truck gains more kinetic energy

67. **Properties of plastic are differed from properties of petroleum**
Because when chemical change happens, the properties of the new material (plastic) differ from the properties of the original material (petroleum)

Question 8

What happen:

1. **If there is much water enters the cell**
The cell will swell until it bursts
2. **If the cell does not get its needs of nutrients, oxygen, and water**
The cell cannot get its needed energy and will die
3. **If the number of cells is increased in the body of a baby**
The baby will grow
4. **If scientists were not invented the microscope**
They could not discover more information about the tiny particles and cells
5. **If you examine a sample of plant cells using the low power objective lens of microscope**
You will see the cells in small size
6. **If the animal cell is surrounded by cell wall**
The animal cell will have a definite shape
7. **If there are no chloroplasts in plant cells**
Plant cells cannot make their own food by photosynthesis process
8. **If there are no bones found in the body of the cat**
They body of the cat will not have a definite shape
9. **If we stain the nucleus of cheek cells with methylene blue**
We can see the nucleus of cheek cells as a blue area

10. **To the brain of a cyclist when he is exposed to a dangerous situation**

The brain sends a signal to the muscles to contract and allow his body to face the danger

11. **To your leg if the muscles found in it are damaged**

The leg cannot move

12. **To the muscles in front of the upper arm and muscles in the back of the upper arm when the forearm moves down away from your shoulder**

The muscles in the front of the upper arm relax while the muscles in the back of the upper arm contract

13. **To the human body if the cardiac muscles don't contract and relax for a long period of time**

The heart cannot pump the blood that carries oxygen to all body cells and the human will die

14. **To the human body when the heartbeats increase during danger**

The heart pumps more blood to the muscles, the heart and other organs and the blood pressure increases

15. **To the lungs when the diaphragm muscle contracts**

The lungs take in the air rich in oxygen gas

16. **If pancreas and gall bladder don't secrete their enzymes in small intestine**

The chemical breakdown of food will not happen

17. **If your body does not get rid of waste**

The body will get sick

18. **If the blood that carries waste materials passes through nephrons of the two kidneys**

The blood will be filtered from harmful substances

19. **If the blood does not pass through the two kidneys during its circulation inside the human body**

The blood will not be filtered from the waste materials and the body will get sick

20. If the pancreas does not make its function correctly

The person will be infected with diabetes disease

21. To the force of gravity if the mass of an object increases

The gravity will increase

22. To the force of gravity if the distance between the object and the Earth's center increases

The gravity will decrease

23. The magnet is approached close to some iron nails mixed with small pieces of paper

The magnet will attract the iron nails, but it will not attract the small pieces of paper

24. If the magnetic objects are placed at a distance and don't locate at the magnetic field of this magnet

They will not be attracted to the magnet

25. If large magnets spin at high speed around the coiled wires

The spinning magnets create electrical charges on the coiled wires and electricity is produced

26. If the electric circuit does not contain a switch

We cannot open or close the circuit

27. If rubber is used in making electric wires instead of copper

The electric current will not flow through the wire

28. If the switch is closed in the electric circuit

The electric circuit will be closed, so the electric current flows through the circuit

29. If a person touches non insulated electric wire through which an electric current pass

He will be shocked with electricity

30. If a large amount of electricity passes through an electric circuit has an electric device and this circuit does not contain a resistor

The electric device will be damaged

31. If electric circuits in houses are connected in series

If one bulb blows out, the others will not work

32. If a magnet is moved rapidly inside a coil of wire in a circuit containing galvanometer

The needle of the galvanometer moves rapidly because of the increase of generated electric current

33. If a patient has a slow or irregular heart beats

An artificial pacemaker is inserted into the chest and stimulates the heart muscle to beat at regular intervals

34. The state of glass when it is heated at very high temperatures

It changes from solid state to liquid state

35. If you hold a piece of frozen chocolate (according to transfer of heat)

Heat transfers from the hand to the chocolate

36. If you touch a hot cup of tea (according to transfer heat)

Heat transfers from the cup to the hand

37. If you heat a piece of butter (according to change of state)

It changes from solid state into liquid state

38. To bridges if engineers do not use expansion joints in their designing

Buckling of bridges occurs as a result of expansion at high temperature

39. To the level of alcohol inside a thermometer if we put it inside hot water

It will rise up

40. The spaces between molecules of matter if we heat it

It will increase

41. To the size of an inflated balloon if it is put in hot weather

Its size will increase

42. The volume of matter when it is cooled

Volume will decrease

43. If no spaces are left between the railroad tracks

Train accidents occur as a result of bending of tracks in hot weather

44. The molecules' movement of a lizard's skin when it stands on a rock in a sunny day

The molecules of lizard's skin absorb thermal energy that released from the rock, and they will move faster

45. The molecules' movement of a hotter substance after mixing it with a cooler substance

The movement of molecules of the hotter substance becomes slower after mixing

46. The heat transfer, when thermal equilibrium takes place between a hot and a cold object

The heat transfer will stop

47. The kinetic energy of molecules of a matter when it becomes warmer

The kinetic energy will increase

48. The mass of a piece of butter after melting it

The mass does not change

49. You are wearing smart clothes in a dark place

They will light up

50. Mixing rock, water and sand

Concrete is formed

51. Making chemical change to some compounds of petroleum

Plastic is formed

52. Mixing sand, limestone and soda ash at high temperature

Glass is formed

Answers

Question 1

Choose:

1.b	2.b	3.a	4.b	5.c	6.c	7.d	8.a	9.d	10.b
11.d	12.c	13.a	14.	15.a	16.a	17.a	18.c	19.c	20.a
21.c	22.b	23.b	24.a	25.a	26.c	27.b	28.a	29.d	30.c
31.a	32.b	33.b	34.a	35.b	36.a	37.a	38.b	39.c	40.c
41.a	42.b	43.b	44.b	45.c	46.c	47.a	48.d	49.b	50.c
51.b	52.d	53.c	54.d	55.b	56.c	57.b	58.c	59.b	60.d
61.d	62.d	63.b	64.d	65.b	66.a	67.b	68.b	69.c	70.d
71.b	72.a	73.a	74.a	75.c	76.a	77.b	78.b	79.d	

Question 2

Choose from (A) what suits it in (B):

1. 1. f 2.c 3. b 4. e 5.a

2. 1.d.C 2.b.D 3.a.A

3. 1. b 2. e 3. a 4. c 5.f

4. 1. b 2. c 3. a

5. 1. d 2. a 3. b

6. 1. b 2. a 3. e 4.c

Question 3

Put (✓) or (X)

1. X	8.✓	15. ✓	22. X	29.X	36.X	43. X
2. X	9.X	16. ✓	23. ✓	30.✓	37.✓	44. X
3. ✓	10.X	17. ✓	24. ✓	31.✓	38.X	45. ✓
4. X	11.✓	18. X	25. ✓	32.✓	39.X	46. ✓
5. ✓	12.X	19. ✓	26. ✓	33.✓	40.X	47. X
6. ✓	13.✓	20. X	27. ✓	34.X	41.X	
7. ✓	14.✓	21. ✓	28. ✓	35.✓	42.X	

Question 4

Write the scientific term:

1. Calorie
2. Law of conservation of mass
3. Artificial pacemaker
4. Chloroplast
5. Golgi apparatus
6. Endoplasmic reticulum
7. Thermal energy
8. Netphone
9. Melting
10. Conduction
11. Meteorologists
12. Urea
13. Muscle
14. Magnetism
15. Freezing
16. Contraction
17. Plastic
18. Magnetic field
19. Galvanometer
20. Gravity
21. Glass
22. Mitochondria
23. Skeletal muscles
24. Glycogen
25. Colon – large intestine
26. Solid
27. Iron
28. Electric conductors
29. Resistor
30. Radiation
31. Electric insulators
32. Switch
33. Expansion joints
34. Atom
35. Convection
36. Gas
37. Molecule
38. Thermal equilibrium

Question 5

Complete the following sentences:

1. Faster
2. Hotter – molecule – down
3. Kidney model
4. Urea – protein or blood cells
5. Repulsion – attraction
6. Melting
7. Created- destroyed- change
8. Molecule -atom
9. Decrease – increase
10. Increase
11. Energy
12. Iron
13. Endocrine – insulin
14. Methylene blue
15. Faster
16. Sweat
17. Ureter – urinary bladder – urethra
18. Expansion

19. Mass – distance
20. Involuntary - voluntary
21. Urea – water
22. Kidney -Nephron
23. Electric shock - water
24. Electric conductors – iron – cobalt
25. Gravitational – decrease
26. Mass
27. Insulin pump
28. Thermal equilibrium
29. Battery – motherboard
30. Hot - increase
31. Tough solid
32. Shrink- wrap

Question 6

Study the following figure then complete the sentences below:

a. **1.**kidney **2.** Proteins **3.** Blood before filtering **4.** Urine

b. **1.** 2 **2.** 1 **3.** 3 **4.** 5 **5.** 4

c.

1.Cell membrane.
2.Golgi apparatus.
3. Nucleus.
4. Cytoplasm.
5. Endoplasmic reticulum.
6. Mitochondria.
7.Small vacuoles.
8.Cell wall.
9.Chloroplasts.
10. Sap vacuole.

d.

1. B 2. A 3. B-A 4. A-B

e. **a.** **1.** Switch **2.** Battery **3.** Electric Lamp **4.** Electric wire

b. **1.** Open and close the circuit **2.** Source of electric current

c. the electric current flow through circuit and the lamp will light up.

f. **a.** **1.** Fig. B **2.** Fig. A **b.** 1. ✓ 2. X

مجانا وحصريا

حمل الان

المراجعة رقم (5)







Give Reason

1- The cell needs energy
To carry out all its life activities and survive

2- The cell allows water to go outside it
To keep the water balance on both sides of the cell membrane

3- You cannot see the body of a bacteria with your naked eye
Because it consists of only one cell that cannot be seen by naked eyes

4- Scientists tend to use microscope in their research
to discover more information about the cell and exchange these information

5- We must rotate the coarse focus and fine focus during examining a sample under microscope
To see a clear image for the sample under the microscope

6- Cats are considered as multicellular organisms
Because their bodies consist of many cells

7- Plant cells can make photosynthesis process
Because they have chloroplasts on plant cells

8- Both of endoplasmic reticulum and Golgi apparatus are involved in transportation process inside and outside the cell
Because endoplasmic reticulum transports protein inside the cell and Golgi apparatus transports different materials between the cells and out of the cell



9- Plant cells have a definite shape
Because the plant cell is surrounded by cell wall which gives it the definite shape

10- Chlorophyll absorbs the energy of the sunlight
To make the food of the plant through the photosynthesis process

11- Mitochondria act as electric power stations in cities
Because they provide the cell with its needed energy

12- Vacuoles act as storehouses in cities
Because they store nutrients, water, and waste materials

13- Some cell biologists work with doctors
To watch how cells can work to repair body parts or how cells respond to different medicines

14- We must stain cells before examining them under microscope
Because cells are usually clear and colorless, so it is hard to see them under microscope

15- Digestive system helps skeletal system in fracture healing
Because it provides the skeletal system with nutrients needed for fracture healing

16- The nerve cells in the nervous system need nutrients
To perform their functions

17- The importance of nervous system for the muscles of heart
Because it controls the movements of heart muscles

18- Muscle cells are in the form of long fibers
To allow movement



19- Muscle cells don’t work alone

Because the size of the muscle cell is very small

20- Skeletal system cannot do the function of movement without muscular system

Because skeletal muscles that is attached to bones of skeletal system allow bones to move

21- Cardiac muscles are considered as involuntary muscles

Because they move automatically, and you cannot control their movement

22- Cardiac muscles contract and relax without stopping

To allow the heart pumps the blood carrying oxygen to all the body cells

23- The muscles that surround the eyeball are considered voluntary muscles

Because you can control the movement of the eyeball muscles

24- When the body faces a danger, the heartbeats increase

Because endocrine system secretes hormones which cause increasing of heartbeats rate to face danger

25- The body needs to convert complex food into simpler substances

Because the body cells need these simpler structures to get energy and grow

26- Saliva plays an important role in digestion of food inside the mouth

Because saliva softens the food and start breaking down it

27- Stomach secretes a digestive fluid when the food reaches it
To allow more food breakdown

28- Walls of small intestine contain blood vessels
To carry the nutrients to all body parts

29- Undigested food becomes solid mass inside the large intestine
Because the large intestine absorbs most of water from the undigested food

30- The liver and muscles convert the stored glycogen into glucose sugar
To provide the body with its needed energy

31- Importance of excretion process to your body
It collects the waste materials produced by the cells and removes them from the body to keep it healthy

32- The digestive system does not share in excretion process
Because it does not work on the waste materials produced from burning food inside the body cells

33- The two kidneys contain many nephrons
To filter the blood and remove harmful substances from the body

34- Formation of urea inside the human body
Due to the break down proteins inside the body cells

35- Blood cells and proteins cannot pass through the kidney's nephrons
Because blood cells and proteins are large

36- Diabetic must give themselves regular shots of insulin
To regulate the sugar level in blood

37- The electric circuit is considered as a system
Because it is a path for electricity that consists of many components work together as one system

38- When a ball is thrown into the air, it will stop moving upward and then falls down
Due to the Earth's gravity

39- Cobalt and nickel are considered as magnetic materials
Because they are attracted to the magnet

40- Wood and copper are not attracted to the magnet
Because they are non-magnetic materials

41- Electric generators have great importance in our life
Because they are used in lighting houses and operating electrical devices

42- The electric circuit must contain a battery
Because it is the source of electricity

43- All metals are considered as electric conductors
Because they allow the flow of electric current easily

44- Most electric wires are covered with rubber or plastic
Because they are bad conductors of electricity to protect people from electric shock

45- Electric wires are made of copper
Because it is a good conductor of electricity

46- Electric wires are wrapped in plastic
Because plastic is a bad conductor of electricity and prevent people from electric shock



47- Some electric circuits contain resistors

To slow the flow of electrons through the electric circuit to prevent its components from damage

48- In the parallel circuit, we can turn off or remove one light bulb while the other light bulbs will remain lit

Because in parallel circuit, the electric current flows along different branches

49- When a magnet is moved rapidly back and forth inside a coil, the needle of the galvanometer connected to the coil moves rapidly

Because electric current is produced

50- Scientists provide the new artificial pacemaker by a built-in antenna

To send information to physicians, so they know how the heart is behaving

51- The heart has a natural pacemaker

To create electrical currents causing the heart to contract

52- Particles of steam have higher thermal energy than particles of water

Because particles of steam move faster than particles of water

53- Ice melts when it is put in a hot cooking pan

Because heat flow from the hotter substance (pan) to the colder substance (ice)

54- Matter may change from one state to another

Because the thermal energy of a matter may change causing a change in the state of matter

55- Evaporation and condensation are two opposite processes
Because a matter changes from liquid state into gas state in evaporation while it changes from gas state to liquid state in condensation

56- Food coloring takes less time to spread out in the hot water than in cold water
Because hot water has more thermal energy, so its molecules have more kinetic energy and move faster

57- Engineers use expansion points in the designing of bridges
To keep bridges safe from buckling when they expand at high temperatures

58- The level of alcohol inside a thermometer rises up if we put it inside hot water and goes down if we put it inside cold water
Because alcohol expands by heating and contracts by cooling

59- Pouring hot water over a metal lid of a glass jar makes it easier to open the jar
Because when the temperature of the metal lid increases, it expands and can be easily opened

60- Matter expands when its thermal energy increases
Because kinetic energy of molecules increases and the spaces between them increases causing its expansion

61- The size of a ballon decreases if it is subjected to cold weather
Because the air inside it contracts by cooling

62- Small spaces are left between the railroad tracks
To allow the tracks to expand in hot weather without being bent to avoid train accidents

63- The handle of an electric iron is made of plastic
Because plastic is a thermal insulator than does not allow heat to transfer

64- The lower part of an electric iron is made of iron
Because iron is a thermal conductor that allows heat to transfer

65- You feel heat when you touch a metal spoon placed in a hot cup of tea
Because the temperature of the metal spoon is higher than the hand so the heat transfers from the metal spoon to the hand

66- Sometimes the final temperature of a mixture of two substances with different temperatures is less than their average temperature
Because some of the thermal energy transfers to the air or the container

67- Heat transfer stops after a while between two mixed substances with different temperatures
Because they reach the same temperature at thermal equilibrium

68- After mixing two substances with different temperatures, the molecules of the hotter substance move slower
Because the molecules temperature of hotter substance decreases

69- The vibration of molecules of a matter increases when it becomes warmer
Because when a matter becomes warmer, the kinetic energy of its molecules increases so their vibration increases

70- You feel the heat of the sun although there is a space between the sun and Earth
Because heat transfer through the space by radiation

71- Aluminum and copper are good conductors of heat
Because they allow heat to travel freely through them

72- Glass and wood are bad conductors of heat
Because they slow down the transfer of heat

73- The mass of ice cubes before melting equals to their mass after melting
According to the law of conservation of mass, the mass of ice cubes does not change when ice changes from solid state to liquid state

74- Decreasing of mass of popcorn grains which have some moisture after cooking them
Because of the evaporation of the water during cooking pop corn

75- Plastic is better than wood to make the handle of cooking pots
Because plastic warms slower than wood

76- Due to friction force, the tire of a moving car becomes hot
Because friction force changes kinetic energy into thermal energy

77- A truck is faster than a small car when both of them move down on the same ramp
Because the truck has mass more than the small car, so the truck gains more kinetic energy



78- Smart clothes have many benefits
Because they can control your body temperature, light up in dark and keep themselves clean

79- Properties of plastic are differed from properties of petroleum
Because when chemical change happens, the properties of the new material (plastic) differ from the properties of the original material (petroleum)

80- Scientists should study the structure of molecules of different materials
To understand their chemical structures that help in understanding their properties

What happens

1- If there is much water enters the cell
The cell will swell until it bursts

2- If the cell does not get its needs of nutrients, oxygen, and water
The cell cannot get its needed energy and will die

3- If the number of cells is increased in the body of a baby
The baby will grow

4- If scientists were not invented the microscope
They could not discover more information about the tiny particles and cells

5- If you examine a sample of plant cells using the low power objective lens of microscope
You will see the cells in small size

6- If there are no chloroplasts inside the plant cells
Plant cells cannot make photosynthesis process



7- If selective permeability feature is absent from cell membrane
The cell cannot control the substances that enter or leave the cell

8- If sugar does not reach mitochondria inside the cell
Mitochondria cannot make cellular respiration and cannot provide the cell with its needed energy

9- If the animal cell is surrounded by cell wall
The animal cell will have a definite shape

10- If there are no chloroplasts in plant cells
Plant cells cannot make their own food by photosynthesis process

11- If there are no bones found in the body of the cat
They body of the cat will not have a definite shape

12- If we stain the nucleus of cheek cells with methylene blue
We can see the nucleus of cheek cells as a blue area

13- To the brain of a cyclist when he is exposed to a dangerous situation
The brain sends a signal to the muscles to contract and allow his body to face the danger

14- To your leg if the muscles found in it are damaged
The leg cannot move

15- To the muscles in front of the upper arm and muscles in the back of the upper arm when the forearm moves down away from your shoulder

The muscles in the front of the upper arm relax while the muscles in the back of the upper arm contract

16- To the human body if the cardiac muscles don't contract and relax for a long period of time

The heart cannot pump the blood that carries oxygen to all body cells and the human will die

17- To the human body when the heartbeats increase during danger

The heart pumps more blood to the muscles, the heart and other organs and the blood pressure increases

18- To the lungs when the diaphragm muscle contracts

The lungs take in the air rich in oxygen gas

19- If complex nutrients don't convert into simple substances inside your body

They cannot be used by body cells to get energy and grow

20- If saliva is not secreted during chewing the food inside your mouth

The food cannot be soften and chemical break down will not happen

21- If pancreas and gall bladder don't secrete their enzymes in small intestine

The chemical breakdown of food will not happen

22- If your body does not get rid of waste

The body will get sick

23- If the blood that carries waste materials passes through nephrons of the two kidneys

The blood will be filtered from harmful substances



24- If the blood does not pass through the two kidneys during its circulation inside the human body

The blood will not be filtered from the waste materials and the body will get sick

25- If the pancreas does not make its function correctly

The person will be infected with diabetes disease

26- To the force of gravity if the mass of an object increases

The gravity will increase

27- To the force of gravity if the distance between the object and the Earth's center increases

The gravity will decrease

28- The magnet is approached close to some iron nails mixed with small pieces of paper

The magnet will attract the iron nails, but it will not attract the small pieces of paper

29- If the magnetic objects are placed at a distance and don't locate at the magnetic field of this magnet

They will not be attracted to the magnet

30- If large magnets spin at high speed around the coiled wires

The spinning magnets create electrical charges on the coiled wires and electricity is produced

31- If the electric circuit does not contain a switch

We cannot open or close the circuit



32- If rubber is used in making electric wires instead of copper

The electric current will not flow through the wire

33- If the switch is closed in the electric circuit

The electric circuit will be closed, so the electric current flows through the circuit

34- If a person touches non insulated electric wire through which an electric current pass

He will be shocked with electricity

35- If a large amount of electricity passes through an electric circuit has an electric device and this circuit does not contain a resistor

The electric device will be damaged

36- If electric circuits in houses are connected in series

If one bulb blows out, the others will not work

37- If a magnet is moved rapidly inside a coil of wire in a circuit containing galvanometer

The needle of the galvanometer moves rapidly because of the increase of generated electric current

38- If a patient has a slow or irregular heart beats

An artificial pacemaker is inserted into the chest and stimulates the heart muscle to beat at regular intervals

39- The state of glass when it is heated at very high temperatures
It changes from solid state to liquid state



40- If you hold a piece of frozen chocolate (according to transfer of heat)
    Heat transfers from the hand to the chocolate
41- If you touch a hot cup of tea (according to transfer heat)
    Heat transfers from the cup to the hand
42- If you heat a piece of butter (according to change of state)
    It changes from solid state into liquid state
43- To bridges if engineers do not use expansion joints in their designing
    Buckling of bridges occurs as a result of expansion at high temperature
44- To the level of alcohol inside a thermometer if we put it inside hot water
    It will rise up
45- The level of alcohol inside a thermometer if we put it inside cold water
    It will go down
46- The spaces between molecules of matter if we heat it
    It will increase
47- To the size of an inflated ballon if it is put in hot weather
    Its size will increase
48- The volume of matter when it is cooled
    Volume will decrease
49- If no spaces are left between the railroad tracks
    Train accidents occur as a result of bending of tracks in hot weather



50- the molecules' movement of a lizard's skin when it stands on a rock in a sunny day

 the molecules of lizard's skin absorb thermal energy that released from the rock, and they will move faster

51- The molecules' movement of a hotter substance after mixing it with a cooler substance

 The movement of molecules of the hotter substance becomes slower after mixing

52- the heat transfer, when thermal equilibrium takes place between a hot and a cold object

 the heat transfer will stop

53- the kinetic energy of molecules of a matter when it becomes warmer

 the kinetic energy will increase

54- the temperature of a piece of metal when you hit it several times with a hammer

 the temperature of a piece of metal will increase

55- if you touch a hot metal spoon placed in a hot cup of tea

 heat transfers from the spoon to your hand by conduction

56- the mass of a piece of butter after melting it

 the mass does not change

57- the stored energy of a stopped object when it goes down on a slide

 stored potential energy changes into kinetic energy

58- you are wearing smart clothes in a dark place

 they will light up

59- mixing rock, water and sand
concrete is formed

60- making chemical change to some compounds of petroleum
plastic is formed

61- mixing sand, limestone and soda ash at high temperature
glass is formed





كيفية طباعة صفحات معينة من ملف معين

مثلا ازاى نطبع الصفحات من صفحة 4 الى صفحة 9



خطوة 1

خطوة 2
اختيار اسم الطابعة بتاعتك

خطوة 3
كتابة الصفحات المراد طباعتها
نكتب رقم 4 ثم نكتب الشرطة دي – ثم نكتب 9

خطوة 4
اختيار نوع الورق

خطوة 5
اختيار A4

خطوة 6